

REPORT
OF THE
**Cottage Industries Sub-
Committee**
UNITED PROVINCES



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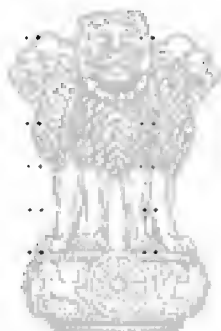
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REPORT OF THE COTTAGE INDUSTRIES SUB-COMMITTEE, UNITED PROVINCES

PRELIMINARY

1. Appointment of the Committee and the Personnel—At a meeting of the Industries Committee of the Post-War Reconstruction Board, held on March 9, 1945, it was resolved that a sub-committee should be formed for "careful investigation of the subject of the Cottage Industries in the United Provinces." Accordingly under G. O. no. 1848/XVIII, dated July 14, 1945, the Secretary, Industries Department, who was the Chairman of the Industries Committee, appointed Cottage Industries Sub-Committee which consisted of the following members:

(1) PANDIT RAJ NATH KUNZRU, M.B.E.	..	<i>Chairman.</i>
(2) RAI BAHADUR MADAN MOHAN SINHA, M.B.E. (Retired Collector and Magistrate)	..	
(3) CHAUDHARY MUKHTAR SINGH SAHIB, ex-M.L.A. (Central)	..	<i>Members.</i>
(4) NAWAB SYED AIZAZ RASOOL, M.L.A.	..	
(5) Hydro-Electric Engineer, United Provinces	..	
(6) RAI BAHADUR B. K. GHOSHAI, Deputy Director of Industries, United Provinces	..	
(7) MR. M. C. PANT, Labour Officer, United Provinces	..	
(8) MR. MAHESH PRASAD, Divisional Superintendent of Economic Intelligence, United Provinces Civil Secretariat, Lucknow	..	<i>Secretary.</i>

2. Terms of reference—The terms of reference as laid down in the Government Order creating the Committee were as follows:

(i) The influence of the war on cottage and small factory industries in the United Provinces and the steps necessary and possible to stabilise the gains, if any, of cottage and small factory industries in the United Provinces.

(ii) The extent to which it is possible to make cottage and small factory industry (all factories not covered by the definition of the Factories Act), complementary to large scale industry.

(iii) The nature and the extent of possibility of application of the co-operative principle to cottage and small factory industries.

(iv) Technical improvements that are possible with particular reference to the use of power. It would be helpful if the amount of the power that can be consumed, can be indicated in each case.

(v) The possibility of applying to these industries the principles of the Factories Act with a view to avoiding sweating (the question of wages may be left to Wage Boards).

3. At its first preliminary meeting held at Lucknow, the Committee unanimously felt that the scope allotted to it for investigation was much too narrow, and it was not possible for the Committee to do justice to the subject within that limited scope. In respect of term of reference numbered one, the Committee strongly felt that it had simply been asked to consider the influence of war on cottage and small scale industries, but not their present condition, which was very important. Similarly with respect to the term of reference numbered two, the Committee felt that cottage industries need only be developed as complementary to large scale industries which may have to be complementary to cottage industry and the Committee should investigate such cases also.

4. The Committee, therefore, unanimously resolved that the Government in the Industries Department should be moved to revise and enlarge the terms of reference accordingly to enable the Committee to do any useful work. Government accepted the resolution of the Committee by their letter no. 2215/XVIII, dated September 5, 1945, and the first two terms were modified as follows, the other three remaining as they were:

(i) A general all-round survey of cottage industries and small factory industries of this Province and, in particular, the influence of the war on these industries and the steps necessary and possible to stabilise the gain, if any, of these industries arising from the war.

(ii) The part which cottage and small factory industries can play in the post-war industrial organisation of this Province and, in particular, the extent to which it is possible to make cottage and small factory industries to large scale industries.

5. **Time taken**—Government had laid down that the Committee should submit its report by the middle of October, 1945, but due to the vast scope of the subject of the cottage industries of the Province, the Committee did not find it possible to finish the work within the time stipulated by Government.

6. **Method of enquiry**—The Committee did not consider it necessary to issue any general questionnaire to elicit information on the subject or to obtain formal oral evidence of persons interested in the subject. The Committee, however, did issue a general circular letter to the different Government Departments, which were in any way connected with cottage and other industries. The departments to which the letters were addressed were: The Industries Department, the Co-operative Department, the Forest Department, the Rural Development Department and the Agriculture Department. Useful information has been supplied by almost all the departments and this has been utilised in drafting the report.

7. A general circular letter was also sent to the following commercial organisations of the Province, viz. the Upper India Chamber of Commerce, the Merchants' Chamber of Commerce, the U.P. Chamber of Commerce, the Muslim Chamber of Commerce and the Northern India Mercantile Chamber of Commerce, requesting suggestions for the development of cottage and small scale industries. All the Chambers have very kindly sent their suggestions, which have been duly considered in the compilation of the report. Persons interested in cottage and small scale industries were also requested through the press to send their suggestions.

8. **Meetings held**—The Committee held eight meetings, five meetings were held at Lucknow, one at Banaras, one at Agra and one at Daurala (Meerut).

9. (i) **Centres of cottage industries visited**—The Committee visited the following centres, viz. Banaras, Kanpur, Lucknow, Agra, Firozabad, and Daurala (Meerut). The Committee contacted workers, manufacturers and dealers in silk weaving, brass manufacture, wire netting at Banaras; in glue-making, brush manufacture, fountain pen making, cycle and perambulator manufacturing and water colour manufacture at Kanpur; in duree-making, shoe manufacturing, patent leather manufacturing, tanning and machine manufacture at Agra; in glass and bangle manufacture at Firozabad.

(ii) **Visit to places outside the Province**—Outside the Province, important centres of cottage industries in the province of Madras were visited by the Chairman of the Committee himself accompanied by Shri J. C. Sethi, Principal, Government Central Weaving Institute, Banaras.

(iii) **Institutions visited**—The Committee visited several technical institutions, like the Government Central Weaving Institute, Banaras, the Government Central Textile Institute, the Leather Working School and the Harcourt Butler Technological Institute of Kanpur and the Government Technical Institute and the Arts and Crafts School at Lucknow. The Committee also visited Dayal Bagh Institute of Agra.

10. **Acknowledgments**—The thanks of the Committee are due to Dr. Krishna Gopal Mathur, D.Sc., F.I.C., Chief Research Chemist to the Delhi Cloth & General Mills Co., Ltd., who, in spite of heavy pressure of work, was good enough to appear before the Committee and offer it the benefit of his experience.

The intimate knowledge and wide experience in the working of cottage industries in the Province and outside of two of our colleagues in the Committee, Chaudhary Mukhtar Singh and Rai Bahadur B. K. Ghoshal have been of considerable help to the Committee.

Shri Mahesh Prasad, Secretary to the Committee, has worked hard and well and the Committee records its appreciation of his work.

CHAPTER I

PLACE OF COTTAGE AND SMALL SCALE INDUSTRIES IN THE ECONOMY OF THE PROVINCE

1. **Economic conditions**—The economic condition of the common man in the United Provinces is hardly satisfactory. The standard of living is low and people are generally poor. Population is large and there always exists unemployment or under-employment. Seventy-two per cent. of the population lives on agriculture with very low income. According to the Report of the Royal Agricultural Commission, people employed in agriculture have no employment on an average from three to six months in a year. One of the major problems, therefore, which confronts the Province is that of providing full employment to the vast population especially to those who are subject to periods of forced idleness.

2. (i) **Improvement of agriculture**—In certain quarters it is suggested that we can solve the problem of unemployment if we make improvement in agriculture. Those who put forward this argument obviously forget that pressure on land is already too heavy and land per capita is already too low. Though improvement in agriculture or introduction of machinery or even co-operative or collective farming must lead to higher production, yet it would not open new ways of employment for the extra population. It should not be understood that we deprecate improvement in agriculture, but we are definitely of opinion that improvement in agriculture is hardly a solution for unemployment.

(ii) **Large scale industries**—It will be recollected that the large scale industries will not solve the problem of unemployment. Even before the war, highly industrialised countries like U. S. A. and the United Kingdom were faced with acute problem of unemployment of millions of their workers in spite of the large foreign market and unrestricted production at their command. We have, therefore, to orientate our industrial policy to suit the specific needs and the genesis of our masses and not merely follow the foot-steps of highly industrialised countries of the west.

3. (i) **Cottage industries, the only solution of our economic ills**—The Committee is definitely of opinion that the only way to fight the monster of unemployment is the development of cottage and small scale industries. Another reason for advocating the development of cottage industries is that the Province has a large number of cottage industries and many of these are still flourishing in spite of restricted and in many cases deliberately planned and organised competition. It is interesting to note that the workers engaged in cottage industries are twenty-five times more than those engaged in large scale industries. This fact alone justifies full attention to the revival and expansion of the old and the introduction of new cottage industries. The Committee is of the opinion that the problem of the Province is not whether there should be small scale or large scale industries but the problem is to devise the best means of providing employment and occupation to the vast rural population which is to remain idle during the off-season of agriculture.

(ii) During the second Great War, the cottage worker of this Province contributed very largely to the supply of equipment and store needed for the prosecution of war. Every type of cottage worker was fully

utilised for producing the innumerable articles from safety pins or soldier's ribbon pin to the camouflage nets. In time of crisis cottage and small scale industries possess very great advantage on account of their dispersed situation. This enabled China to carry out a prolonged war against a highly industrialised country. In this country, production of many articles like camouflage nets and solar hats had to be introduced in the United Provinces, merely because the main producing provinces were threatened with bomb attacks.

(iii) The Committee is also of the opinion that given proper assistance and guidance, cottage industries can successfully hold their own in the market. As has been stated above, the cottage industries have survived and in some cases flourished in spite of untold disabilities. They have very many advantages and above all the genius of the people on their side. They provide occupation to the worker without making him a slave to his occupation. They give the worker greater personal freedom and do not compel him to migrate from his home for finding occupation. The Committee does not propose to discuss at great length the justification of cottage industries as their importance is now universally recognised. If adjusted to changed circumstances and tastes, cottage industries can hold their own even in this Atomic Age. It was small scale industries which helped China to oppose Japanese aggression.

4. Protection and encouragement of cottage industries in national interest—In this report, therefore, we have measured our recommendation with the yardstick of employment. In order to avoid the unnecessary burden on the consumer we have suggested ways and means to make the cottage industries more efficient and less costly. We further maintain that the multiplication of cottage industries will produce a far healthier and a more intellectual and art-loving nation, than if the people be made the slaves of big machines.

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CHAPTER II

SURVEY OF COTTAGE AND SMALL SCALE INDUSTRIES

1. The Committee agree with the Government that before anything can be done, a general all-round survey is absolutely necessary. The problem of cottage industries has been investigated several times, particularly between the years 1939-44, in various provinces, yet a complete survey has never been made. With the short time and limited resources at the disposal of the Committee, a detailed survey of this nature is not possible nor a non-official body like this Committee is competent to take up such a task. The Department of Industries has made a rapid survey of the industries in the United Provinces and the Committee has mostly drawn upon this material. It has also made use of the published material available in other reports. The Committee has selected a few important industries of the Province and has examined them in their details. We, however, recommend that a complete survey of all the cottage and small scale industries may be made and be revised from time to time.

2. (i) **Definition of cottage and small scale industries**—Cottage industries and small scale industries have been defined in various ways at different times. The Committee, therefore, has decided to give a definition of cottage and small scale industries for the purpose of its report.

(ii) **Cottage industries**—The Committee accepts the definition of Chaudhary Mukhtar Singh and is of the opinion that cottage industries are industries in which manufacture is carried on by the owner himself with the help of the members of his family, dependants, relations, and with a few wage-earners and the total number of all such helpers does not exceed nine, provided that the work is done in the home of the cottage worker or in some small karkhana. The employment of power or organisation on the basis of limited or unlimited liability will not exclude the industry from the category of cottage industries.

(iii) **Small scale industry**—Small scale industry means any industrial establishment or concern organised on limited or unlimited liability basis wherein artisans or wage-earners are employed by the owner or owners for his or their own benefit provided the total number of workers does not exceed fifty.

3. (i) **Difference between cottage and small scale industry**—The main difference between a cottage industry and a small scale industry is that in the first case the work is entirely done by the artisan himself and for his own benefit while in the case of small scale industry the work may be organised by the capitalist for his own ends.

(ii) We very much wish that a distinction in the two types of small scale industries noted above be maintained so that when workers combine in a corporate body for improving their financial condition, they may not be classed with the capitalistic concerns. They should get the same support both from the public and the Government as they would have received if they would have been working as cottage industries. In any future enactment to avoid sweating and exploitation of the worker, the distinction between the capitalistic and workmen's societies must be made so that the workers may not be deterred from forming themselves into corporate bodies.

4. **Survey**—The following brief survey of some of the more important industries will convince one of the vitalities that still exists in cottage industries.

5. (i) **Textiles "A" Cotton**—The United Provinces is a very old cotton growing place. From times immemorial, both types of cotton, coarse as well as fine, were produced.

(ii) **Ginning and pressing**—Hand-ginning was generally practised in homes but now ginning factories are established and hand-ginning is only partially practised. With the development of electricity in rural areas, it should be possible for cultivators to have gins and presses of their own on co-operative lines. A ginning factory may serve cotton-growers of a group of villages. This will enable the villager to keep the cotton seed in the village itself for its use.

(iii) **Spinning**—Hand-spinning is practised in some of the western districts of the Province, particularly in Meerut and Moradabad. During the war it did not get any special impetus and it is said that the main reason was that it did not pay the cottage worker as a whole time work. There was considerable hand-spinning in wool for army blankets because wool spinning provided considerable income. The cotton hand-spinning industry is now receiving some impetus due to the Congress Ministry, still the production cannot be called considerable. This is again due to the new scheme introduced by Mahatma Gandhi that the sale of *khadi* should not be encouraged as much as the production of yarn by those who want to use *khadi*. The Committee is of the opinion that hand-spinning of cotton cannot pay a cottage industry unless certain conditions like the restriction of mill yarn and the compulsory use of *khadi* are brought about. The Committee, however, does not intend to suggest that *khadi* production for the producer's own use cannot be developed, but at present the survey of industry does not indicate that it can be a regular industrial feature in the near future. The Committee is, therefore, not in a position to give a decision on the basis of facts now existing whether hand-spinning can be a means of giving substantial employment to the partially employed or the unemployed.

(iv) **Weaving**—Cotton hand-weaving is spread all over the Province. Tanda (Faizabad), Mau (Azamgarh), Sandila (Hardoi), Maghar (Basti), Meerut, Etawah, Moradabad, Amroha, Bilari, Mau-Aima (Allahabad), are well known centres of cotton textile production. Handloom cotton weaving also includes *duree* and *newar* weaving. Agra, Khairabad (Sitapur), Sambhal (Moradabad), Said Raja (Banaras) and Bareilly are important *duree* weaving centres. Pile carpets are made at Agra, Fatchpur (in Bara Banki District), and Shahjahanpur. *Newar* weaving, though an old industry, has developed during the war at almost all handloom weaving centres, but the old centres of Mathura, Meerut, Agra, Moradabad and Kanpur are still very important. In Meerut, power looms have been introduced. Some of the power looms, working on the automatic multiple principle, were also locally made. Such indigenous manufacture of machines and tools is a healthy sign and deserves encouragement. During the war, tape weaving and new designs in *newar* with a display of colour were introduced as innovations.

(v) The detailed survey made in 1935 showed the number of throw-shuttle looms as 117,000 and of fly-shuttle looms as 50,000 providing work for 504,000 workers. 52,000,000 lb. of yarn was consumed, out of this 43,000,000 lb. of yarn was supplied by the Indian mills, 6.5 million lb.

by hand-spinners and the balance about 1,065,000 lb. was imported. This does not, however, include 3,675,000 lb. of artificial silk which was also consumed over these looms. 60 per cent. of this yarn was of coarse counts 10 to 16; 24 per cent. between 18 to 24; 4 per cent. above 40 and 7 per cent. below 10. The yarn of higher counts was imported. The pre-war estimate of the cloth produced annually on handloom was 30 crores of yards.

(vi) During the last war, yarn could not be imported and the handloom industry suffered a great deal on that account. To add to its difficulties, textile mills began to consume their own yarn to a larger extent and consequently lesser quantities of yarn were left available for the handloom weavers. A new class of middlemen cropped up in the meantime and they, by fair means or foul, tried to secure as much yarn as possible and thus the actual weavers were thrown at the mercy of these middlemen. The percentage of profit on yarn is high and the higher the profit, the tighter became the hold by the middlemen over the weavers. Most of these concerns did not own a single loom nor any place for weaving but only exploited the weavers by supplying them yarn and getting cloth made from them at their own rates and terms. The Government did not weed out the middlemen in the distribution of yarn and thus the poor weavers could not get the full benefit of even the limited supply of yarns. Factories manufacturing yarn employed all possible methods to supply the least quantity of yarn out of their factory and that too not of proper quality.

(vii) The fact that the industry has survived these hard days, speaks well of the sustaining power and resourcefulness of those engaged in it. The Committee feel that unfair advantage has been taken by the organised mill industry of the conditions created by the war in supplying to the cottage workers inferior yarn and that too in inadequate quantities. The Textile Control Board took very little account of the difficulties and requirements of the handloom industry. In Madras, co-operative weaving societies and several weaving establishments were granted concessions to secure yarn at ex-mill rates and import dyes direct for their use. No such efforts were made in the United Provinces to assist the handloom weavers.

6. Power looms—Before the war, efforts were made to instal power loom factories so as to weave sarees with Jacquard borders. Two factories were set up at Banaras, one at Mau-Aima with about fifty looms, four in Kanpur and one at Kanauj. During the war, only five factories worked; one in Kanpur and one in Kanauj with about 80 looms in all. They produced filter cloth and bandage cloth. No details of production are available. It is a debatable point whether a small power loom can be successfully run against a handloom in this Province. The Committee does not, therefore, recommend any special effort on the part of Government to introduce power looms in the Province. The introduction of power loom should be left entirely to the initiative of the workers.

7. "B" Dyeing and cloth printing—The well-known cloth hand-printing centres are: Farrukhabad, Lucknow, Pilkhua (Meerut), Jahangirabad (Bulandshahr), Muthura and Tanda, Curtains, bed-sheets, *fards*, *lihafas* sarees and dress pieces are the main items which are dyed and printed. Mathura is noted for its Ram Nami Print in single colour. Pilkhua and Jahangirabad are of recent development. Tanda supplies cheap prints for markets in Nepal. Over 5,000 persons are engaged in the trade and the production is valued at Rs. 1,50,00,000. This industry has suffered a great set-back during the war, because of the extreme shortage of cloth and synthetic dyes and also because of the fall in export trade.

8. (i) "C" Silk industry—It is very strange that although the Province consumes a very large quantity of silk, it does not produce any silk of its own. Many efforts are said to have been made in the past in this direction and it is said that local conditions did not encourage development of sericulture. The Committee feels that sympathetic, systematic and sustained efforts are still required to be made to produce silk in the Province. Since the Government of India has established a Central Sericulture Station at Behrampur (Bengal), a serious effort should be made to produce a suitable breed of silk worm in the Province. We have all the climates in the Province and there does not seem to be any reason why we cannot establish a suitable centre for sericulture.

(ii) In and around Ahraura, district Mirzapur, silk worms grow wild on Asna trees. A beginning may be made by trying to develop these very breeds. The Committee that had gone into the question of sericulture in the past have said that there are tracts in the United Provinces where silk rearing is possible. Since then there have been numerous improvements in silk production and it would be in the fitness of things if a renewed effort be made now.

(iii) During the period 1930-40 Japan had completely ousted Indian indigenous silk from the market. There were two reasons for this, viz. Japan reeled its silk better and exported especially prepared warp silk called "organzine". The prices were very low as compared with the cost of silk produced in Bengal, Kashmir or Mysore. Research is needed to investigate why silk cannot in the same way be produced more cheaply in this country. The Committee finds that during the war, Banaras silk weavers continued to consume the stocks of silk obtained in very large quantities before the war and are now going in for Indian silk. But the craving is still for Japanese and Chinese silk and the Indian filatures must look up to overcome this prejudice.

(iv) The other centres outside Banaras consuming power and using reeled silk were Mubarakpur and to a small extent Mau. Mubarakpur has been consuming silk for making Shalta, a kind of cloth used by Muslim ladies. Other centres of silk weaving are: Shahjahanpur, Sandila, Mau, Bilari, Pilibhit and Etawah. These were using spun silk and waste silk. Spun silk is used largely in Banaras also for producing chaddars, shirtings and dhoties on fly-shuttle looms. These used to be known as Kashi silk to distinguish them from brocades and gold thread work of Banaras. The spun silk yarn was all imported. It came from Italy. Later on Japan ousted the yarn of every other country.

(v) It is estimated that there are 50,000 throw shuttle looms and 5,000 fly-shuttle looms employed in weaving all varieties of silk and giving employment to 140,000 workers. The production of silk before the war was estimated to be 18 crores of yards valued at 9.5 crores of rupees. The Banaras gold thread saree and brocade weavers are still sticking to their old Banaras looms with their intricate harness for their Jacquard. But the majority of those using spun silk use fly-shuttle looms with Dobby or Jacquard introduced from time to time for the benefit of the handloom industry. Banaras and Mau produced their own Jacquards, the price of which had gone down to Rs.20 as against Rs.100 the price of imported Jacquards.

9. (i) "D" Woollen industry—Sheep rearing is a very old occupation in the Province. The sheep of our Province, although very hardy, produce very coarse type of wool. The breed needs improvement and the Animal Husbandry Department should look into it. Improvement in clipping and grading of wool is also necessary.

(ii) Carding of wool improved during the war as improvised machine was introduced by mechanics of Panipat. This machine though in no way a regular carding machine, enabled cottage workers to utilise wool of longer fibres without cutting before carding. There is considerable hand-spinning of wool done in the Province as about 70 per cent. of the yarn consumed by the carpet industry and all yarn consumed in blanket industry is spun in the Province. It is felt that the production of mill-spun yarn would improve the industry of carpet and Government should encourage the installation of wool-spinning mill. Hand-spinning can also be improved by supplying mill-carded silvers, but mill-spun wool will be superior to hand-spun wool.

(iii) Before the war, the handloom weaver had been using imported yarn for shawls but at present no such yarn is available. Superior class carpets are still made of mill-made yarn both Indian and imported. Blankets are made all over the Province, but the main centres are in the districts of Muzaffarnagar, Meerut and in Najibabad (Bijnor District).

(iv) Before the war, there used to be 30,400 throw-shuttle looms and 150 fly-shuttle looms for the weaving of blankets and tweeds. The number of people engaged in weaving was about 97,000 men producing 3,050,000 yards of woollen fabrics every year.

(v) Pile carpets deserve special mention as they form the bulk of woollen articles produced in the Province. As already stated, Agra and Mirzapur are the main carpet-making centres. About 18,000 looms are in Banaras and Mirzapur areas, which alone consumed 116,000 lb. of yarn per annum. Superior carpets are sold as high as Rs. 120 per square yard.

(vi) Carpet industry suffered very much during the war. The bulk of the production was meant for export. In Mirzapur and Banaras, the Industries Department and the Banaras State found an alternative occupation for weavers in the production of barrack blankets for soldiers. The end of the war has given a new life to the carpet industry in these areas and all the weavers have come back to their looms. The industry has benefited by blanket production to the extent that much more woollen yarn is now available in these very areas. The women spinners are still fully occupied. In fact this area is ready to consume all the yarn that can be made available. It is said that at present 20 lakhs square yards of carpets valued at 16 million rupees are produced. The carpet manufacturers expect this boom to continue for some time to come. The Committee is of opinion that the industry requires control by Government so that the quality may not deteriorate. Complaints for cut-throat competition and other undesirable practices are already reported and there is great danger that in this way the market may be lost. It is possible to control at least the quality meant for export and this will be of great benefit to the industry without causing any loss of legitimate profit to the producers. At present many new capitalists without previous experience have rushed to this business and created a new and dangerous problem for the industry. This is another reason for recommending some form of control to help the workers, otherwise continuance of the existing conditions may bring about the ruination of the industry.

10. "E" Army blankets—The blanket industry earned great importance during the war because of the unusual demand for army blankets. The Industries Department alone supplied about 19 lakhs of such blankets valued at Rs. 1,50,00,000. This gave the much needed income to the people specially in the rural areas. Extra income went largely to the spin-

ners who never had such steady demand for their yarn before. The Committee notes with regret that the Department of Industries did not leave behind any permanent result of its good work in respect of blankets. The Department had installed towards the end some finishing plant at Najibabad also, but no organisation was developed which could take up even one of its centres and run it for the future benefit of the blanket industry. The Committee feels that it was possible for the Department to organise production centres which could be developed into flourishing co-operative societies even after the termination of the war, if due attention had been paid to the importance of such a step.

11. "F" Wollen industry in the hills—The Industries Department had a scheme for the development of the woollen industry in the hills. The Committee notes with regret that changes were made in the development scheme far too frequently with the result that no substantial improvements could be made. The Department had to fall back upon its own production centres for the supply of yarn in which workers were assigned the mere position of wage-earners. No effort was made to organise their co-operative societies. In fact the existing societies were killed or allowed to die. This cut at the very root of the original idea underlying the scheme, viz. organising the workers and developing the entire organisation in a manner that the whole working and management could be done by the workers themselves. There has been some improvement in the designs and quality but it is not commensurate with the expenditure that was involved. The Committee feels that during the war these schemes were not worked effectively to meet the extreme shortage of woollen fabrics and thus given permanent market to wool workers.

12. "G" Hosiery—The cottage hosiery industry starved during the war although it developed very much. The main difficulty arose in the matter of yarn and needles. These were rationed and those having war orders were given preference in the matter of their supply. The cottage hosiery industry was, however, mainly confined to the manufacture of socks and stockings. If it is properly organised it has good potentiality of capturing the market but small power machines may be more suited and helpful for the work.

13. (i) Leather and leather goods—"A" General—India has a third of the total cattle of the world (250 million cattle besides 48 million sheep) and has long been the world's largest supplier of hides and skins. India's output was estimated at about 21 million cow hides, 5½ million buffalo hides and 25 million skins (goat, sheep and kid).

(ii) Before the war 40 per cent. of India's cattle hides and 55 per cent. of skins used to be exported. A portion of the cattle hides was exported in half-tanned condition called East India Kips.

(iii) This Province contributed nearly 25 per cent. of the quantity exported out of India. In 1934-35 the Province exported 3,09,946 maunds of hides and 1,07,673 maunds of skins. Kanpur is the principal centre of trade in hides and skins.

(iv) There has been improvement in slaying in the slaughter houses but conditions in the rural areas are still the same. United Provinces hides are not yet classed as superior. The Hide Cess Committee of 1928 drew attention to the flaws and suggested remedies which did not receive the attention they deserved. We strongly recommend that Government should see to the removal of these defects at an early date. Proper grading for export and tanning will encourage improvements. There is enormous loss due to

bad flaying and bad curing. It is unfortunate that grading is discouraged by buyers. This fact stands in the way of improvement in flaying and curing.

14. (i) **"B" Tanning**—The resources of the United Provinces in hides and skins and babul bark being large, the development of tanning industry is but natural. The beginning of factory tanning was made by the Ordnance Factory at Kanpur in the first quarter of the nineteenth century. Kanpur has now all the modern tanneries of the United Provinces except one at Dayal Bagh, Agra.

(ii) Tanning is of three types: (i) modern leach process tanning, (ii) pit tanning or layer process and (iii) bag tanning. The bulk of tanning is done with vegetable extracts. Skins are usually tanned by the pit or layer process. Bag tanning of hides is practised mostly in villages. During the war the industry expanded several times. The total production of leather in all tanneries is estimated to be worth Rs. 34,00,000 in normal times, but during the war it rose to Rs. 2 crores.

15. (i) **Cottage scale**—Bag tanning is practised in villages from times immemorial and the main tanning material employed is "babul bark". It produces leather suitable for desi shoes and lighter hides for (charas) water-lifting buckets and "Mashaq" etc. A very large quantity of dead hides and lighter hides is consumed in this manner. During the war, bag tanned leather had to be used for lighter footwear and other articles.

(ii) Next to textile, leather is the most important industry. It is a pity that, though the United Provinces have got all the facilities for the development of this industry yet the cottage worker is the least helped person. When so much is said to help the depressed classes, the neglect to improve the conditions of this industry which is mainly followed by Scheduled Castes, is simply deplorable. Very little has been done to improve tanning in villages, nor has any attempt been made to grow tanning material and to find out the tanning contents of the different materials available in the Province. During the war both bark and chrome tanning improved and many small establishments were started. The system of reducing the tanning period from six months to three producing the same type of good leather must be introduced and improved. Considerable improvements in village tanning is necessary. The Industries Department had launched a scheme to develop village and small scale tanning. The scheme had been appreciated very much but has recently been abandoned. Whatever may be the difficulty of the Department, efforts to improve village tanning are necessary and this industry, which gives employment to a very large number of persons belonging to poor and depressed classes, should rank high in Post-War Development Scheme. Sustained efforts, especially by means of demonstration tanneries in which workers may be organised on co-operative basis are very desirable.

(iii) Patent leather is made in Agra. Due to the stoppage of imports, it has a good market. Formerly it used to crack badly and had become unpopular. It is claimed that this complaint has been overcome. It is a cottage industry capable of development with proper technical guidance.

16. (i) **Maufacture of leather goods**—The Province is famous for its leather goods, footwear, suit-cases and other travelling requisites, harness and saddlery. In fact the first Ordnance Factory established at Kanpur was and still is called the "Harness and Saddlery Factory."

(ii) There is a very big scope for developing leather trade and making all types of costly leather and leather goods which are being imported even now.

(iii) The bulk of footwear and other articles is produced in small workshops and cottages of individual workers. It has been estimated that about 150,000 workers are engaged in this trade 50,000 of whom are at Agra, 27,000 at Lucknow, 20,000 at Kanpur and the rest scattered all over the Province. The value of the annual production is estimated to be 8 crores of rupees. The produce includes village charas and plough harnesses as also the fine shoes and suit-cases. Very large quantities of footwear are exported to places outside the United Provinces.

(iv) The footwear trade was controlled by the Footwear Control Order. The manufacturers were required to mark retail prices. The maximum prices were given in the Control Order. The control has now been withdrawn.

(v) These controls have brought out the need for combined action by each branch of the industry and also the need for planning and rationalisation. Improvements in wasteful methods and joint working both for production and distribution have engaged the attention of the industry. Research in the technical field and organisation for distribution on the lines of "Bata" and "Flex" footwear are the immediate necessities of the industry.

(vi) It must be noted that in post-war days there will be a world shortage of leather. It is necessary for our Province to utilise the present opportunity. If we export leather instead of hides and skins we can place crores in the pockets of the poor. The Committee wishes to emphasize that steps should be taken to organise tanning and prevent export of hides and skins, if possible.

17. *Grindery*—Before the war, India used to import heel, toe tips, eyelets, nails, thread, etc. (known as grindery) from abroad. When importation became impossible, India had to rely upon its own resources. It is creditable for the cottage worker that he produced all these articles by equipment and tools of his own make. They may not be efficient and the articles produced may be a bit inferior but this gives credit to the ingenuity of our workers and proves the possibility of their manufacture in this country.

18. (i) *Glue*—Glue is made practically in every big city. It is made either from fleshings, leatherscrap or from bones. In our Province the main raw material is fleshings or leatherscrap. The Committee visited the people engaged in this industry at Kanpur. The number of persons employed in this profession are more than 700. There are two big mohallas consisting of about 80 families in Kanpur.

(ii) This is a very important industry but disorganised and neglected. During the war there was great need for glue and a factory for its manufacture to meet the supply of the war department was set up in Agra. But unfortunately it has been dismantled. The industry needs to be looked after and improved on scientific lines. India imports a large quantity of glue every year from foreign countries and it is a pity that even such a simple industry has not been well organised so that high quality glue could be produced at a commercial centre which has a full-fledged technical institute—the Harcourt Butler Technological Institute. It seems to be an imperative and immediate need of the hour that the whole process may be so designed that ordinary workers may take advantage of the same and make more money than they are doing today.

19. *Gut*—Gut manufacture is done on a small scale in many places and the main purpose for which it is used is for carding bow. Sialkot in the

Punjab has a flourishing trade in this industry and with a little guidance we can easily manufacture this article in most of the places in the Province. Government should investigate and set up an organisation to develop this cottage industry.

20. Ferrous articles—Weights, small hand-pump fittings, crushers, etc. are made on a small scale at a number of places especially at Agra. Small domestic machines are also manufactured. There is scope for such small workshops in the rural areas.

21. Iron utensils and agricultural implements—Iron domestic utensils like pans (karhai), tawa, chimta, etc. are made all over the Province and there are small cottage centres almost in every district. Kanpur and Agra have many small workshops which send out their produce to villages also. These workshops make ploughs, khurpies, hoes and other agricultural implements. Kanpur, Agra, Bareilly and Ghaziabad also make bigger agricultural farm equipments and large pans for boiling sugarcane juice. Persian wheels and other lifts are always in demand in villages and small works are being set up with advantage.

22. Iron safes—Iron safes of the country type are made by many small firms in various places in the Province. The only factory which manufactures iron safes of standard specification is the Bhatia Safe Works at Kanpur. Steel safes, cabinets, strong-room doors, cash and office boxes, household and hospital equipment are their principal products. Safes and cabinets made by the firm have been approved by Government departments and are regularly supplied to them. Steel furniture which is at present imported mostly from the Punjab and Bombay has a good future.

23. Trunk making—Steel trunk, light iron sheet trunks, cash boxes, etc. are made in Allahabad and other towns. Allahabad is famous for trunk-making and sends its products even to towns outside the United Provinces. These are all hand-made. Use of machines will further improve this old small scale industry. Supply of punched and shaped sheets will enable the existing centres to thrive.

24. (i) Cutlery—Scissors—Meerut is the oldest and the main centre for scissors. Before the war 100 dozens of scissors per day used to be made. The industry met the internal demand completely during the war and some supplies were made for Defence Services also. The main difficulty is to get the proper type of steel suitable for good cutlery. After the article is made, it requires heat treatment for which some heat control arrangement is required. Central heat treatment workshops may develop this industry. The Industries Department organised production of scissors for war supplies and produced 18,000 scissors.

(ii) **Knives** are made at Hathras and here again the same difficulty about heat treatment has stood in the way of improvement and expansion. Along with heat treatment the introduction of small electric grinding machines and power punches are needed.

(iii) Skilled workmen do exist and they did much to meet war period requirements. They need technical guidance and support which they deserve.

(iv) Sialkot, Batala and Wazirabad are important centres in the Punjab and produce very attractive and useful cutlery. They have produced most of the surgical instruments successfully. In our Province no attempt has been made to improve the finish or the quality of the material. If proper type of small machines for grinding and finishing is introduced, this industry can be very well developed.

(v) **Razors**—A Meerut mechanic makes very good hollow ground razors and is making about three dozens a day. If individual efforts can produce such nice articles, with Government help the industry can be easily developed.

25. (i) **Locks**—The province is famous for locks made at Aligarh. The industry owes its existence to the Postal Department. In 1860 the Postal Department established a Metal Workshop at Aligarh to meet the metal and lock requirements of the department. Trained workers were imported and local workers trained in the technique of the manufacture of locks of the types of Chubbs, Hobbs, etc. The local artisans picked up the technique and started producing good quality locks. The lock manufacturing industry is not at present confined merely to factory production but is being carried on also on cottage basis in Aligarh and in villages near about Aligarh.

(ii) Before the war, the Aligarh locks suffered heavily on account of competition from imported pressed cheap locks. The production of such locks has, however, been recently developed at Aligarh by those who profited from war supplies. The Aligarh type of lock will, therefore, hold the market if the quality is controlled, because of its durability and security value.

(iii) The total production of locks at Aligarh before the war was estimated at 15 thousand superior quality locks and 60 to 70 thousand inferior quality locks per month.

(iv) During the war, the demand for locks increased considerably. The Supply Department failed to obtain timely supply of good locks from its contractors. The United Provinces Industries Department had, therefore, to take up the work at the instance of the Supply Department. The existing cottage and small scale organisation of the industry was not disturbed. Control was established at the initial stage of the manufacture of parts. A workshop was fitted for lock parts and local workshops were also engaged for the fabrication of these parts only. The parts were then distributed to cottage workers who work at their houses in the city and villages. The assembled locks were checked up and finally finished under supervision in assembling workshops organised by the Department. The contractors failed to go beyond 10,000 locks per month but the organisation set up by the Department took up the figure to 260,000 per month in 1943. Towards the closing period of the war the supply was maintained at about 150,000 per month. The total supply was of 4,000,000 locks valued at about Rs. 61,00,000. This proves beyond doubt what proper organisation and guidance of Government can achieve.

(v) **Fittings**—Along with the manufacture of locks, Aligarh has made a name for building and electrical metal fittings. Some of these products compare very favourably not only with the products made in other provinces, but even with the imported articles. The industry needs organisation of small producers to minimize unhealthy competition and consequent deterioration of quality.

26. **Wire-netting**—The manufacture of wire-netting both of iron and brass has been developed during the war. Iron wire-netting for fencing is made at Kanpur and brass wire gauze is being produced at Banaras in a factory which was started to meet the Supply Department's orders. There is sufficient demand for iron wire-netting for building purposes. This work can be done on cottage and small scale basis also.

27. **Engineering works**—The Province has not unfortunately developed mechanical engineering industry to any appreciable extent. Small concerns have, however, developed in important cities mainly to meet the requirements of motor and cycle owners. Some of these concerns possess small machines and skilled workmen, and during the war, they claim to have produced all motor car parts. Some workshops have also produced several cycle parts, carriers, stands, spokes, etc. Many workshops grew up to meet the demands of ordinary factories. Many of the component soldier's equipments were made in the workshops. The Harness and Saddlery Factory of Kanpur alone is responsible for the growth of such workshops in Kanpur and Lucknow in large numbers.

28. **Rolling mills**—Small rolling mills for making iron rounds and flats from scrap iron have been set up in a number of places. They have suffered from control but this is an industry which is likely to stay. The method should be improved and full use should be made of these small concerns. They compete in prices with the best factories inasmuch as they save in freight and use scrap iron as their raw material.

29. **Galvanizing and tanning**—During the war black sheets were available but galvanized and tin sheets were not available. At several places successful attempts were made to make articles like water buckets, cans, etc. from scrap iron sheets and to galvanize the articles which were made.

30. **Enamelling**—Sign-boards, badges, etc. are the main products in this line. There are a number of small firms making enamelled sign-boards only. Banaras University is also interested in this class of work. An enamel factory in Aligarh did quite well during the war but it is handicapped for want of hollow wares.

31. **Can-making**—Tin cans especially for oil and ghee, are made at Agra, Hathras, Khurja, Etawah and Shikohabad. Besides these can-making concerns, there are numerous other tin-smiths in big cities like Kanpur, Lucknow, Allahabad, Agra and Banaras who make water tanks, water heaters, garden water pipes, buckets and tubs from galvanized iron sheets. They make these things to meet local demand and have a brisk trade. The method of manufacture and the shape and finish of the products leave much room for improvement.

32. **Electric machinery equipment**—Electric fans were made at Kanpur by the Ravi Engineering Company and at Dayal Bagh, Agra, with Government grants. The Ravi Company has closed down but fans are being manufactured at Dayal Bagh and two new concerns are expected to be established at Meerut and Lucknow. Dayal Bagh and in Kanpur hem are making electric heaters and stoves, irons and other domestic electrical appliances.

33. (i) **Non-ferrous metal industries**—Domestic utensils are made at numerous small centres in the Province, and some villages are famous for them and used to do considerable trade with markets all over India. The centres in rural areas are almost all for cast or moulded ware. They depend upon old utensils for raw material. Before the war, many of the bigger centres obtained copper and zinc ingots also. The estimate of production of brass and copper utensils during the war is Rs. 3,00,00,000.

(ii) The main centres for this type of work are Hathras (Aligarh), Mirzapur, Farrukhabad, Oel (Kheri), Ajodhya (Faizabad), Mallawan (Unnao), Bindki (Fatehpur), Hardoi, Lucknow, Baraut (Meerut), Banaras, Bahraich, Agra, Bah (Agra). The utensils are also made out of sheet brass and copper. Sheet brass work is concentrated at Moradabad

and is done to some extent at Banaras also. Moradabad produces a considerable quantity of brass moulded articles too. Some hand presses are in use for plain cups and saucers, but the bulk of shape-making is done by hand. Copper utensils are in most cases of sheet copper and are made mostly at Lucknow and Farrukhabad. The annual production of brass and copper things is estimated to be as follows:

						Rs.
Moradabad	..	..	..	..	..	1,53,00,000
Mirzapur	..	..	..	..	..	50,00,000
Farrukhabad	..	..	..	..	..	45,00,000
Rest ..	..	..	..	..	..	5,00,000
Total						3,00,00,000

(iii) During the war all non-ferrous metal utensil industries suffered very heavily.

34. **Ornamental brassware**—Moradabad and Banaras are famous for ornamental brasswares which are generally exported out of India. The total annual production exceeds Rs. 30,00,000. The export suffered during the war but internal demand was enough to consume the reduced production. The work is done by artisans at their workshops. Each process is done by a different artisan. It is a cottage industry. Over 5,000 men are engaged in it. No lacquer is used and the art lies in fine engraving and repose work. This type is less popular now due to the rage for colour.

35. (i) **Cupro-nickel and electroplated wares**—The products in this line are teacups, service-cups, forks and spoons, lotas, thalies, tumblers and other service (non-cooking) utensils. Before the war cupro-nickel or German silver sheets and ingots came from abroad. During the war the main sources of this alloy was fired bullets and millions of forks and spoons were supplied by Moradabad out of this material.

(ii) **Electroplating of cupro-nickel articles** is cheap but the plating needs considerable improvement. Moradabad is also famous for sheet lotas, thalies, cups, tumblers, etc. These are either tinned or electroplated. The quality of tinning had, however, very much deteriorated even before the war owing to cut-throat competition. With quality marking of product, it is possible to raise the quality to the old standard of pacca galai.

36. **Brass wire**—This industry has developed during the war very considerably at Aligarh and Banaras. Brass wire drawing is an old art at Aligarh and the wire is required in lock-making also. Big engineering concerns like Messrs. W. Leslie and Company established centres for the production of brass wire by cottage workers. Copper wire is also drawn at Banaras and some gold thread making concerns succeeded in making insulated copper wire for electrical purposes.

37. (i) **Gold thread industry**—Gold thread industry is an important industry of Banaras in which more than 9,000 men are engaged.

(ii) There are six main processes involved which are carried out separately, viz. (i) silver bar or pasa making, (ii) guchli or coarse wire making, (iii) fire wire drawing, (iv) flattening (badla), (v) twisting flattened wire round a silk or cotton thread and (vi) gilding.

(iii) A cheaper variety of gold thread is also produced by using the process known as Rasli gilding. There are about 50 firms engaged in this class of work. The price of gold thread varies and depends on the price of gold and the quality and fitness of the thread.

(iv) The wire drawing process engages roughly 5,000 persons. The most common thread made at Banaras is the 1,000 yards per tola variety, with a total value of Rs. 70,000 daily, weighing 30,000 tolas. The industry faces considerable difficulties as the cotton yarn of required fineness and quality is not available at present. Yarns of 100/2 and 80/2 counts are generally used.

(v) **Discs**—The disc used in gold thread industry were, in olden days, imported from France and some from Surat. Due to the enterprise of a local man, Mr. Lele, who was sent to France as a Government Technical scholar to learn the art, disc making industry has been established in Banaras. Mr. Lele's work is, however, handicapped at present on account of the stoppage of import of diamonds and rubies from countries which were the main sources of supply.

38. (i) **Pottery and ceramics**—There is no large ceramics industry in the Province. There are cottage workers at Khurja, Chunar and Nizamabad. Khurja has been producing blue pottery known as Delhi pottery and also ornamental pottery similar to Multan pottery. This industry exists as a remnant of the Moghul period. There has been considerable improvement and manufacturers now use China clay, sand-stone and glazes. The articles are fired in updraught furnaces made locally. The maximum temperature is 900° C.

(ii) During the war the Industries Department made an attempt to organise the potters of Khurja for the production of utility articles. Government furnaces were put up in 1943 and about 200 persons were trained. Improved types of furnaces have been set up and firing temperature has been raised to 1,200°C and high lead glazes have been replaced by lead-free glazes. Pottery worth about Rs.1,40,000 was produced by the Government workshop.

(iii) **Chunar** pottery is really ordinary clay pottery glazed with glass powder, borax and hematite. The articles are fired in direct contact with flames. Fired articles are purchased by glazers, who apply the glaze and fire again. During the war even these pots, tea-sets, cups and saucers reaped a good harvest. Normally the sale is mainly at the railway stations of Chunar, Moghal Sarai, Banaras and Allahabad.

(iv) **Nizamabad**: Black pottery, tea-sets, vases and numerous decorative articles are made of pond clay. The articles are made on the potter's wheel. The black colour is obtained by firing the articles in closed pitchers and getting a layer of soot deposited on them. Decorated pots are engraved before firing and mercury zinc amalgam is filled in the engraved lines. The articles made are very fragile. They are merely for show and even vases cannot be used with water for flowers. Their demand is extremely limited.

39. **Glasswares and bottle making**—The making of bottles, small phials for scents, etc., flasks for carrying water (*ganga jalis*) and *kachhi shishies* is done in cottages, which have small furnaces. They also use block glasses or broken glass pieces for blowing out these articles. There are about 500 of such concerns in the districts of Aligarh, Agra, Moradabad and Bijnor. The Province now gets enough of block glass from large glass factories which have developed in the Province. In fact before the war, the United Provinces produced glassware worth one crore out of a total production in India of 1.2 crores. Many of the small concerns are also blowing hollow wares and chimneys. The introduction of scientific improvements and the supply of the proper type of glass at cheap rates should prove helpful to the industry.

10. (i) Glass bangles—Bangle making is done predominantly on cottage scale. It is concentrated in Firozabad, where a population of about 21,000 out of the total population of 40,000 is engaged in this work.

(ii) Rapid development of the glass bangle industry dates from 1925 when the system of making bangles by rollers was introduced. "Reshmi churi," once the monopoly of Japan and Czechoslovakia, is now being produced in the United Provinces on mass scale. Firozabad supplies 80 per cent of the need of the country. Bangles are considered not merely an article of luxury.

(iii) In Firozabad there are 67 roller bangle factories, 125 furnaces for making twisted bangles, 100 bangles cutting workshops, 500 muffled furnaces for enamelling and decoration of bangles, 2,400 bangle joining cottages and 1,500 dealers. The estimated annual production is 1,00,00,000 gross pairs.

(iv) Decorated bangles deserve special mention. Plain glass bangles are cut on the lines of diamond cutting and decoration is done with enamel or liquid gold. It is estimated that 8,000 lb. of liquid gold was used before the war. This work suffered heavily during the war, for want of liquid gold and other materials, fuel and transport facilities. Local firms have started making liquid gold though not quite successfully. They need help and guidance in this direction.

(v) The starting material for bangle making is block glass. It is made at Firozabad by all roller bangle factories and five others which make only block glass. About 2,50,000 maunds of block glass was produced annually before the war. At present the production is not more than 60,000 maunds. Prices of block glass have increased considerably, for example of Red glass from Rs. 7 to Rs. 60 per maund, of China glass from Rs. 25 to Rs. 300 and about ten times in many other types of glass.

(vi) The industry has done wonderfully well in copying the designs of foreign make and discovering their own cheaper methods of manufacture. The Committee was pleased to see the improvements made by the industry mainly with its own efforts. When the Committee visited Firozabad, those engaged in the trade complained that they did not receive satisfactory assistance from the Government, specially during the war.

(vii) Several improvements are needed and expected. An important proposal is to supply gas to joiners who work at present with kerosene oil flame under depressing conditions, most injurious to health. Whether gas should be supplied to the joiners from a central generating plant or from the smaller units installed in individual factories should be examined by Government before they instal a central plant, already recommended by the Glass Expert.

(viii) In comparison to the need of the industry, there is dearth of roller workers. For the healthy development of the industry, it is necessary to send out selected workers to receive training in Japan in roller working and other lines.

(ix) The industry suffered as a result of the war. It was classed as a luxury industry and had to be under very low priority for assistance in the matter of transport and supply of coal and chemicals. The industry still faces difficulties in regard to the supply of fuel, kerosene oil and other materials.

41. Glass beads—This is a new industry introduced by the United Provinces Government. Czechoslovakian experts were obtained and they

started training at Banaras about five years ago. The experts have gone but the training class continues at Banaras. One trained Indian lady is the head of the training class. She teaches necklace making and this had encouraged the production of fancy beads by the trained persons. Some of the trained men are doing well. So far 50 persons have been trained. The training class in Banaras is conducted in a room which is full of the most choking and obnoxious smoke injurious to health. Immediate steps are necessary to remove this complaint.

42. **Agricultural industries**—Three-fourths of our population lives on agriculture which is not always a whole time job. The cultivator requires industries connected with his vocation so that he can work in his spare time and add something to his slender resources. In other countries there is a branch of research workers who devote their time to the investigation of new industrial and commercial uses, for agricultural articles. We recommend that an attempt should be made to popularise as far as possible selected agricultural industries amongst the cultivators and to give all technical help and guidance to cultivators to take to these industries.

43. (i) **Dairy and ghee**—The most important industry of the Province is the dairy industry. On account of the difficulty of transport, people in rural areas have to turn their milk into ghee. Today the production of ghee is the most well known cottage industry of the Province. The United Provinces is considered one of the best tracts for producing ghee of high quality which is exported to the important consuming markets of India. The average annual production of ghee is estimated at 20 lakhs of maunds which was valued at 8 crores of rupees during the pre-war days, but during 1944-45 price of ghee went up by four times.

(ii) During the pre-war period the Province used to export ghee on an average of 150,000 maunds but during the years 1944-45, the export was about 60,000 maunds only; over a lakh of maunds was being purchased for army requirements and sent for clarification and distribution to the Military Grading Centre at Agra. The districts of Etawah, Mainpuri, Shikohabad, Bulandshahr, Khurja and Agra are specially noted for ghee. The co-operative ghee societies, which are working in these areas have done a lot to improve the quality and gain public confidence. Still more attention is required to be given to this very important industry.

(iii) The slaughter of milch cattle during the war has given a great setback to this industry. Though there has been imposed restriction in slaughtering milch cattle and also in their export but the check has not been very effective. If dairy industry in the country has to survive there is urgent need for the protection of milch cattle from slaughter and export.

(iv) Adulteration is rampant in this trade and since the advent of high prices and establishment of many hydrogenated factories, pure article is hardly available. Strong control and legislation against adulteration is, therefore, absolutely essential.

44. (i) **Gur**—Next to ghee, gur industry occupies an important place in agricultural industry. Gur making is one of the ancient industries in the Province. It is carried out in villages in most cases by the cane growers themselves, as an industry subsidiary to agriculture or to put it more correctly as the final stage of growing. It is estimated that the large sugar factories consume only 18 per cent. of the cane grown and khand-saries 6 to 8 per cent; 10 per cent. is used for seed and the rest, i.e. about 65 per cent, is converted into gur. The pre-war production was estimated to be 20,00,000 tons.

(ii) Gur is exported to all parts of the country and some of it is taken over by sugar refineries. Meerut, Muzaffarnagar, Sitapur and Bareilly are the principal gur markets.

(iii) Co-operative societies for supplying crushers and pans on self-liquidating basis can do a lot of good to the people.

(iv) Gur is decidedly more nutritious than sugar and there has been a great demand during these days in the entire country. Government controlled the movement of gur with the result that this valuable food material was allowed to ferment to the detriment of every body. Gur was forced to be sold at Rs. 6 a maund and thus profit went in the pockets of the middlemen at the expense of the poor cultivator.

45. **Oil crushing (in village ghanies)**—The village Teli is an important industrial worker of the rural areas. Almost every good sized village has Teli. Bullock-driven Kolhus are worked in cities also as oil crushed in these wooden kolhus especially mustard oil and til oil is considered to be very good for domestic and edible use. The production is considerable. The Industries Department introduced an improved type of wooden kolhu in villages by demonstrating its use and manufacture in selected villages. These kolhus were similar to the Wardha Ghanies. These ghanies require slightly bigger bullocks but the yield is better. They have been adopted in some places. It is felt that greater attention should be paid to the production of edible oils in villages. If co-operative marketing can be organised and pure edible oil is sold in sealed containers at reasonable rates the village Teli will remove a great want and have much better market for a long time to come.

46. (i) **Saltpetre**—This is an important product of the Province. Till 1860 India was the only source of the supply of saltpetre. Later Chilean and German deposits were developed. The Province produces this important chemical on more or less a cottage industry basis. It is recovered from saline earth deposits in villages. Crude saltpetre mixed with salt is purified and crystallized in about 33 factories mainly in Farrukhabad and Mathura Districts. It is estimated that 90,707 maunds are produced. It is used for making nitric acid, gun powder and fire-works and also for manure.

(ii) This is a work generally taken up in the villages in slack season. The method is very crude and requires improvement. More money has to be invested and the process of artificial growth of saltpetre may be introduced with advantage. So far the industry has considerably suffered on account of the excise rules made to guard against manufacturing of salt. We hope with the removal of salt tax this industry may flourish.

(iii) Saltpetre is very good manure containing 12 per cent of nitrogen. If Government had patronised and organised this industry it would have supplied the deficiency of our soil in nitrogen and potassium and would have increased the yield. There are a number of handicaps in its development. The main of them are freight charges which are very high as it is booked as chemical as against sulphate of ammonia which is booked as fertilizer. We recommend that every effort be made to develop this important industry and utilise it in the country. It can be developed in a number of other places in the Province. India is deficient in potassium salts and this is the cheapest source.

47. (i) **Sunn fibre industries**—Sunn hemp is prepared in many villages. Farmers have to use ropes and strings for many purposes and so have to grow some fibre crop.

(ii) In Eastern districts sunn hemp growing for fibre is very important. This fibre is sometimes sold and exported and a large quantity of it is used in making string ropes and **tat patties**. In foreign countries the method of extracting fibre has been much improved, the process of netting has been scientifically studied and cheap appliances are introduced whereby clean fibre free from dirt is produced. Processes worked in Hungary, Italy and Japan, and string and rope making machines used in Japan are recommended to be tried.

(iii) In Khadar areas, **munj** and **bhabar** string making is important occupation in slack season so also is mat making. If we study the exports of Japan we are struck by the huge exports of straw-braids and mattings that every year go out of Japan. If we study their methods and adopt them we may give suitable employment to our people.

(iv) **Mundhas** (straw seats) are made in different localities and they are useful articles. They, however, find only local sale as their transport occupies more space and makes the freight expensive. It seems to be desirable that better designs and colour display may be introduced.

48. (i) **Tobacco industries**—Tobacco is used both for smoking and for chewing purposes. Smoking tobacco is made everywhere and gives employment to some people in the Province. Ordinary betel tobacco is also made in many localities and is famous. Very expensive perfumed betel tobacco is made in many localities and it is sold at fancy prices. Lucknow and Banaras are specially noted for these preparations.

(ii) **Bidi** is made in most of the cities and is poor men's cigarette. Leaves in which tobacco is wrapped are found in some forests of the United Provinces, but mostly these leaves are imported from Central Provinces.

49. **Perfumery**—Rose is grown for perfumery in many villages in Ghazipur and Aligarh Districts. Perfumers from long distances go to these villages and prepare their rose water and other products. So also is **khas** collected and **khas** oil and essence are prepared. On account of cut-throat competition and want of scientific knowledge this industry is dying out though there is great demand for genuine articles.

50. **Honey**—In Jhansi and other Eastern hilly districts there is a good production of honey. Bee-keeping is not scientifically followed yet there is much demand for good and pure honey. It is easy to develop this industry on a scientific and up-to-date method. Regular schools should be run to give education and training in modern methods and the use of new appliances. We recommend that bee-keeping may be a subject in basic training in these localities and the sale should be organised on co-operative basis.

51. (i) **Chemical industries**—The development of chemical industries has unfortunately been markedly disappointing and has not at all been commensurate with the size and requirements of the Province. There is a popular misconception that in these days of scientific and industrial development there is no place for small industries specially in regard to the manufacture of chemicals and drugs.

(ii) The Committee has received on this subject a very interesting note from Dr. Krishna Gopal Mathur, D.Cs., F.I.C., Chief Research Chemist to the Delhi Cloth & General Mills Co., Ltd., Delhi. Dr. Mathur, who has conducted a survey of chemical industries lately, maintains that there has been an extensive development of small scale chemical industries in high-

ly industrialised countries like Japan, Britain and Germany. Dr. Mathur has published a book in which he gives a list of 80 firms registered in 1945 in Great Britain for starting complicated chemical industries, each with a modest capital of £ 100 or even less. He is definitely of the opinion that small scale industries "can easily be organised and efficiently run with a bare capital of ten to twenty thousand rupees and with labour, about twenty to thirty men depending on the nature of the industry". Dr. Mathur adds "a survey of the various types of chemical industries was recently conducted by me with a view to select such industries as can be set up on a small scale with least possible difficulties. A study on the lines has led me to the conclusion that if a selection is made of such industries which do not depend on coal or technique in high temperature work, power or steam or machinery, that selection will represent the type most suited for development of small scale till the position of services like steam power and electricity remain in our towns and villages as it exists at present." Chemical industries like synthetic rosins and plastics, a large number of pigments, starch and dextrines, absorbents like active carbons and active earths, valuable organic preparations of zinc and lead, disinfectants and perfumes and drugs from Indian plants, do not require much technical processing and in most of these instances are confined to such simple operation of mixing, heating, solutions, precipitating or washing or dyeing. These industries are bound to be seized with avidity by enterprising members of the public, if proper facilities and encouragement are given to them by Government. It is most unfortunate that owing to lack of support and patronage most of our indigenous chemical industries have either died out or are now in moribund state. Dr. Mathur is definitely of the opinion that the vital needs of the chemical industry on small scale are : (i) State control like that instituted in Japan or recently attempted by Sir Vishwaswarya in Bombay Presidency, (ii) smaller research and analytical laboratories to which a lay-man could apply for the solution of his difficulties, (iii) grant of certain privileges specially in the matter of transport.

(iii) We entirely agree with him and recommend that a section in Harcourt Butler Technological Institute be set apart for developing chemical industries. A suitable grant for the development of small scale chemical industries be given to Vigyan Kala Bhawan, Darurula (Meerut) and other institutions of this type. This institute aims at developing cottage industries and trains boys in industrial chemistry so that the students may earn their own living.

52. (i) **Borax refining**—Borax is imported into India from Tibet and refined at Ramnagar in Naini Tal District. During the last war this industry was prosperous. The price of crude borax was Rs. 15 per maund. On an average 5,000 maunds of refined borax valued at 2 lakhs of rupees was made at Ramnagar, at the rate of Rs. 25 per maund. In the post-war days the industry suffered in competition with cheap imported borax sold at Calcutta at the rate of Rs. 8 per maund.

(ii) Import of refined borax into India from foreign countries in 1938-39 amounted to 25,906 cwt. valued at Rs. 2,99,222. The price of imported crude borax from Tibet had considerably fallen and was Rs. 7 per maund as against Rs. 15 per maund in the last war. The total import of crude borax was 10,000 maunds valued at Rs. 70,000.

(iii) During the present war the borax industry again got an impetus. The Supply Department had orders for 25,000 cwt. of refined borax per year. The possibility of cheapening the price of refined borax made from

imported Tibetan borax by refining it at a suitable place needs examination. The main cost is freight which is very high.

(iv) Borax is an important chemical and many industries such as glass, pottery, metals, etc. require it in appropriate quantities. Boric acid is also made from borax and is in good demand.

53. Stationery articles—Stationery articles like slate pencils, chalk pencils, coloured pastels, etc. are made at several places and people are making good profits out of their manufacture. Water colours for brush work in schools are also made in tablets.

54. Soap—There are about 200 small factories for making soap by semi-boiled and cold processes. The annual production of these small factories is estimated to be 100,000 maunds. This industry received a set-back during the war as the supply of chemicals was strictly controlled and other materials were difficult to buy. Sajji made out of reh has been largely used for making washing soap to meet local demands. There is a large scope for soap making of a small scale industry and it seems necessary to make the rural areas also soap-minded as far as washing of cloth is concerned.

55. (i) Wood industry—Furniture and general wood-working and other classes of woodwork are being made throughout the Province, but Bareilly, Saharanpur and Nagina have specialised in certain branches. Bareilly is known for the manufacture of every variety of furniture, Saharanpur and Nagina for carved articles.

(ii) The orders from the Defence Department considerably helped the wood industry as a whole. Huge orders for furniture, beds, tent pegs, shelves, stretchers and building fittings were placed by the Defence Department with firms at Bareilly, Dehra Dun, Moradabad, Lucknow and other places. New sawmills were also started to meet the demand of the Military supplies. Full details of the orders received and articles made in various centres of manufacture are not available, but the following few figures would indicate the expansion of the industry. The output at Bareilly during the war is estimated at 20 lakhs of rupees yearly against 3½ lakhs in normal days. Dehra Dun which was not conspicuous in wood trade before the war, has an estimated yearly production of approximately 10 lakhs of rupees in value.

(iii) Saharanpur is noted for wood carving and inlay (brass) industry. Partition screens, tables, cigarette and cigar boxes, trays, peg-tables, etc. are the main articles made there. Europe and America were among their prominent markets. On an average 200 people were engaged in the industry and the yearly production was estimated at Rs. 80,000 in value in pre-war days as against 300 men producing articles of 1½ lakhs in value at present. The monthly earnings of the workers have improved which range between Rs. 100 and Rs. 122 as against Rs. 30 and Rs. 40 before the war.

(iv) The use of well seasoned timber and improvement of designs will considerably help the industry to keep up its tradition and importance. The wood carving industry of Nagina has also difficulties similar to that of Saharanpur and needs looking after.

(v) Wooden toys—A new industry for the manufacture of wooden toys considerably developed during these days. Much of this success is due to the absence of imported toys in the market. The chief centres are Bareilly, Dehra Dun, Meerut and Lucknow. There are five concerns at Dehra Dun one of which was engaged in the manufacture of models of aeroplanes, tanks, and armoured cars for the Defence Department. Recently a new fac-

tory has been started at Lucknow for the manufacture of Kindergarten, Montessori and other educational toys for schools, the Red Cross, etc.

(vi) Carts, motor cars, guns, tanks, aeroplanes, doll houses and animals on wheels, etc. are generally made. Borang, deodar, neem, mango and tun are the main timber used.

(vii) The monthly production is estimated at Rs. 22,000, Dehra Dun having the biggest share of Rs. 17,000 and Lucknow Rs. 2,500 leaving the balance of Rs. 2,500 for other places.

(viii) The industry needs to be reorganised and some small machines required to be introduced with a view to the cheapening of the cost which alone will help the industry to compete in the post-war periods with imported articles. Attractive and changing designs of cheap and bright paints will have to be evolved.

(ix) **Lacquered toys of Banaras**—Soft white wood obtained in the forest of Mirzapur is the main source of wood. The shapes are first produced in the lathe and then lacquering is done. This is an old industry.

(x) Another important item is set of toys and utensils in boxes for babies. The bulk of the work is done at Amroha. The main market is Banaras. Round about Banaras also this work is done. There is a good sale of these but as in the case of wooden toys, there is an urgent need of organisation and improvement of the industry also, if it has to stand in market in open competition.

(xi) **Lacquered woodwork of Amroha and Lucknow**—Lathe worked legs of beds with lacquering work is done in these places. A motley effect is created by a very ingenious process. These workmen also produce fancy inset boxes, bowls, lamp stands, etc. The production of these articles has been copied from the Punjab and encouraged by Government U. P. Handicrafts.

(xii) **Manufacture of beds, carts, big boxes, etc.**—The production of these articles of industries is seen in many villages especially in the Western United Provinces. Rath or artistic chariot is made. Besides ordinary bullock carts. Beds made at Najibabad, Jhansi and Tilihar, etc. are famous. Boxes are made in many places in the western districts of the United Provinces by village carpenters. They are unusually heavy.

(xiii) The best method of marketing is to take them to village and district fairs and exhibitions which are held in almost all districts of the Western United Provinces. Dealers also take these articles to Kutchi Fair and Sonapur Mela.

56. **Kattha and cutch industry**—There is said to be only one factory which produces 1,000 tons of kattha per year. In addition a considerable good quantity of kattha is made on cottage basis by employing crude methods which may be improved with great advantage. Kattha makers establish themselves in the forests of Lakhimpur, Gonda, Bahraich, Bareilly and Pilibhit. Wood cutters go with them and chop wood into pieces which are boiled in big iron pans. The thick substance is then poured on beds of sand and dried in the open. Kattha made in this process is largely used for paper. During the war cutch dye was also used in large quantities and this dye is being used even now to some extent. The process of manufacture may be improved with advantage.

57. **Hand-made paper industry**—The Province has an old centre of this industry at Katpi. With the increasing demand for hand-made things an effort had been made to develop the hand-made paper industry. The prospects have not been found bright, unless only specialised or fancy papers

are made. The main problem is of supply of suitable pulp. The making of pulp by "Thenki" or pounding with stone cannot meet the requirement for the specialised types. During the war several attempts were made to produce ordinary paper for packing and writing. The experience is not encouraging for peace time. Besides writing paper, considerable quantity of paper is made for wrapping gold and silver articles and sweets and condiments at Agra and also for making *tazia*. This paper is made from grass pulp of which considerable quantity is imported from Nepal. This paper is still used. The scheme of the Industries Department was an elaborate one and consisted of training centres and training institute for research and experiment at a central place (Dehra Dun Research Institute and subsequently Harcourt Butler Technological Institute, Kanpur) for introducing improved methods in hand-made paper making. Opinion is divided about the success of the scheme. It is a fact, however, that the hand-made paper industry had developed at many places during the war but the restrictions of Control Order did not allow the use of hand-made paper as an extra source of supply as the allotments were made in weight. The consumers of hand-made paper were handicapped because the hand-made paper is heavier. Thus a great opportunity was lost.

58. **Brushware**—The brushware industry at Agra, Meerut and Kanpur is mainly on the cottage industry lines. Cloth brushes and hair brushes are mainly made. Brooms and brushes for removing cob-webs are very common. The raw material used is horse and cow tail hair and bristles and fibres such as Mexican fibres, Palmyra and cocoa and rice root fibre. The wood used is mostly *farashi*, *eakain*, *haldu*, *run*, and *teak* which are available locally. Sorting of hair fibre, making of handles, drilling of brush-backs, insertion of fibre and bristling, all these processes are done by hand. Unfortunately the statistics of production by the cottage workers is not available. The cottage workers are fairly clever in their work, especially at Agra but not organised.

59. **Fountain pen industry**—One of the important industries which has recently developed is the fountain pen making industry. One Mr. Hirday Narain of Lucknow was the first man to undertake the manufacture of pens and pen nibs. Dayal Bagh was the next institution which manufactured complete fountain pens. The Goel Fountain Pen Works at Kanpur has done considerable work in the manufacture of gold nibs. The factory has set up improvised machines of its own for nibs and other parts of fountain pens. This is indeed a creditable achievement. The factory claims to have produced all parts except the rubber tubes. During the war there was a great set-back in the manufacture of pens. The figure of the production of pens and pen nibs, unfortunately are not available. With the growth of literacy in the Province this industry bids to be one of outstanding importance and deserving of all support and encouragement from Government.

CHAPTER III

PROBLEMS

1. We have described in the proceeding chapters the conditions of the cottage and small scale industries in the United Provinces. We now propose to discuss some of the problems or difficulties faced by these industries. It is not possible for the Committee to go into minute details about the problems of each individual industry. It would require discussion of subjects many of which are purely technical. Further it would require far more detailed investigations than has been possible for the Committee to undertake. We have, however, found that generally speaking the difficulties are more or less common to all. We, therefore, propose to discuss the problems in a general way giving instances of particular industries, by way of illustration. The difficulties common to all are:

- (i) Supply of adequate raw material of good quality and at reasonable prices.
- (ii) Supply of finance.
- (iii) Technical improvements.
- (iv) Designs and standardisation.
- (v) Difficulties in finishing.
- (vi) Marketing, distribution advertisement and exploration of markets.
- (vii) Taxation, transport and other problems.
- (viii) Supply of power.

2. (i) **Supply of adequate raw material of good quality and at reasonable prices**—In the case of cottage workers raw material includes pre-fabricated material, even finished components. The cottage worker is very much handicapped in obtaining adequate material because of the difficulty of finances and of arrangements for stocking materials which are obtained seasonally for use throughout the year, for instance the oil crusher cannot compete with exporting agents in purchasing adequate quantities of oilseeds and has, therefore, to depend on the little he can get with his own resources. Similarly the tanner had to lose a lot of good hides for the same reason. The cottage worker cannot, therefore, be assured of adequate supplies of his materials and has either to work seasonally or to buy whatever is available at different times at whatever prices.

(ii) The difficulty that pinches him most is his inability to get materials of good quality that he needs to produce goods of standard quality. The cottage worker has been enjoying a premium on the ground that his products are better and more durable. The cottage workers like handloom weavers are in great danger of losing this established reputation permanently, because they are generally not able to command the best materials. Similarly in the matter of steel, brass and other metal sheets and ingots, etc., they are faced with the same difficulty. The utensil maker has to depend entirely on old utensils to which he can rarely add pure metals or fresh alloys. The handloom weaver suffers most in this respect and his difficulties deserve discussion in greater detail.

(iii) The Fact-Finding Committee (of handlooms and mills) has devoted one full chapter to the difficulties in the matter of raw materials of handloom weavers. They have held that "so far as yarn is concerned,

there is hardly any doubt that the handloom weavers is being mulcted on several fronts, by a host of middlemen and parasites whose existence leads to the 'pyramiding' of the prices of yarn and who have for long carried on nefarious practices in regard to quality as well as quantity of the yarn supplied and fully exploited the ignorance, poverty and helplessness of the weavers. It appears that yarn by itself is a tremendous differentiating factor, which while it handicaps the handloom industry in a variety of ways, is of substantial assistance to the mill industry."

(iv) Some of the malpractices mentioned by the Committee in the matter of supply of yarn continue to exist even now, for instance "lower counts are passed as higher counts, correct counts are sold but hanks are shorter in length, slightly lower counts of yarn are passed as higher counts." To this is to be added a very serious malpractice. We deliberately call it so on the part of combined spinning and weaving mills, i.e. they usually sell yarn which is only fit for welt or could be classed as "rejected." Bundles containing these yarn do not bear any special marking to indicate that they are not what could be called standard yarn. This gives yarn dealers an advantage but the weaver remains helpless. It has also been pointed out by the Fact-Finding Committee in paragraph 80 of the report that "the yarn dealers particularly have yarn spun with a very low tensile strength which are passed on to the handloom weavers."

(v) The difficulties mentioned above have been faced by all cottage industries, for instance any popular brand or trade name of leather is often surreptitiously employed by dealers to pass other types of leather as the well known brand though they are inferior in quality but resemble it. This seriously affects the quality of the product. We do not, however, propose to deal at length on this difficulty of the cottage worker in obtaining the right type of raw material because this fact is universally known. Mention should, however, be made of his difficulty in not getting varieties of raw materials which are essential to enable him to produce variety of designs and qualities. In most cases he has to depend on products of any particular company with which his local dealer is connected. It is well known that new producers of raw materials or new dealers in raw materials offer more attractive terms to the retail dealers and thereby compel the cottage worker to use their raw materials, irrespective of the fact whether they are suitable. The price factor is almost of parallel importance, if not greater than that of quality of raw materials. So long as the cottage worker continues to buy his raw material in the dearest market and sell his finished products in competition with mills and imported articles, i.e. in the cheapest market, it is impossible for him to make his living out of his work.

(vi) Far too many middlemen operate in the distribution of raw materials, especially those which are pre-fabricated like yarn and tanned leather. Cottage workers mainly use such materials. The remuneration of these middlemen mostly unessential, is a very heavy burden on the price of raw materials but unusually middlemen are not content with their lawful remuneration only. They indulge also in the malpractices mentioned above and the charges on account of these malpractices go to increase the actual cost of raw material to the cottage worker in a manner which is absolutely unjustified and forms a heavy burden on the latter. The Committee, therefore, feels very strongly that the service the middlemen render is not only very expensive but undermines the very existence of the cottage industry. Suppliers of raw material have usually no permanent interest in the industry concerned and therefore are not prepared to take a long view of the results of their malpractices. It is needless to add that the cottage worker gets no

advantage of the wholesale price which all large concerns can manage to get in the purchase of raw material and is, therefore, a great sufferer.

(vii) The Fact-Finding Committee have recommended "Drastic Legislation to stop the scandal of such high profit-making on a raw material at the expense of a helpless class of people." It has to be carefully considered if such action is feasible. Without such drastic action it may be difficult to stop the prevailing malpractices and save the cottage workers from them.

3. **Supply of finance**—Finance is the most essential requirement of an artisan. He needs fund to buy his raw material, he must have financial resources to wait for good price before selling his output and he should be in a position to allow some credit to his wholesale buyers. He needs capital for his equipment also. It is well known that he has to depend upon the *mahajan* or *sahukar* for all his financial requirements. The *sahukar* charges a very high rate of interest for the money he advances either directly in form of cash or indirectly by supplying raw materials. His credit being poor, the rate of interest is unavoidably high. The cottage worker's real asset is his labour and his personal credit. His tools and implements are not of much value. The result is that the cottage worker has to buy his raw material at a very high price and has to depend on the sweet will of his *sahukar* in his dealings. He has to pledge his finished product with the *sahukar* or to sell it at a very low price and keep on postponing purchases of new equipment or renewal or replacement of the old ones.

1. (i) **Technical improvement**—It is a common saying that the cottage worker insists on using the process followed by his father and grandfather. It is, therefore, very difficult to induce him to alter it. This conservatism is, however, not an inherent defect in the cottage worker. He dares not take up improved methods for he has no resources. It has often been found that the improved types of looms and other appliances which Government Departments have tried to introduce have not been taken up at first by cottage workers, but they have rushed for them when their uses and advantages have been demonstrated elsewhere, particularly by some of their own brethren. The problem of taking up improvements, therefore, is not so much due to apathy as it is due to want of proper guidance and facilities for the adoption of the improved appliances at the right time. It has been rightly stated by the Cottage Industry Committee of 1937 that it is a mistake to take any one aspect of the problem and to try to tackle it irrespective of others. If success is to be achieved a comprehensive policy of assistance is necessary. For instance, the attempts made in the past to introduce improved types of looms among workers by means of tutorial classes have not been successful because there were no arrangements made to demonstrate their use on a commercial scale, to supply looms on easy payment system, or to supply the right type of raw material required for improved appliances and finally because there was no organisation to take or market the improved products. We have, therefore, found that the difficulty is not merely one of want of knowledge of improvements, but of facilities for adoption of the improved methods of appliances and technique. The worker does not always come to know even of the existence of improved appliances and machines which have been devised in other countries to make his task easier and his product better. It takes considerably long for these improvements to filter down to the home of the cottage worker and the present organisation of the industry has no provision for rendering this necessary assistance to him in a regular manner.

(ii) Further it will be appreciated that in the present-day world where all the resources of chemistry and engineering are available to the manufacture, we have to find out some method by which new uses of raw materials and new processes of manufacture are made known to the cottage worker. The knowledge and the skill have to be acquired before he can stand on his own legs. The worker is generally illiterate and even if he be literate, his education is hardly enough to allow him to study scientific literature available on the point. To keep oneself in touch with up-to-date improvements in different process of industries, is not an easy job. This work can only be done by some organised agency engaged on research to meet the specific need of the cottage worker.

5. **Designs and standardisation**—(i) One of the strongest features of the cottage worker is his ability to produce a variety of designs and keep on changing them without having to incur appreciable initial capital outlay. Unfortunately in the matter of designs also the cottage worker has to depend upon his tradition very largely and till very recently was not able to keep abreast of the changes in tastes and fashion that have been taking place rather rapidly. This is true particularly of the industries termed "artistic." We do not, however, wish to minimise the value of tradition to the cottage worker when we make these remarks. In fact the traditional character of many of our products which are especially artistic has very seriously deteriorated on account of misguidance to produce articles to suit the taste of foreign buyers. In our opinion what was needed was rational alteration in the designs to suit modern conditions without destroying their oriental character. It is not at all difficult to render this service to the industry, but it is definitely futile to expect an individual cottage worker to be able to do so unguided. Even large scale industries have now to maintain regular organisations for designs and many large scale industries have found that even big concerns are not able to evolve original designs themselves. They have, therefore, combined organisations for the supply of designs only. There are associations and institutes for designs in England and America which actually dictate what designs should be introduced in the coming season. They supply ideas in advance to the industries. They go into full details and make variations to suit the requirements of respective lines. As stated above, designs form the backbone of the cottage worker and it is needless to add that this important problem has remained neglected in the present organisation of the industry here. The attempts made here and there by middlemen or organisations have in the long run done more harm than good, although it must be admitted that they have enabled the industry to tide over difficult periods. It has been found that changes in designs have been really made on the basis of demand of foreign buyers. In some industries foreign buyers have taken proper care to evolve suitable designs as in the case of the carpet industry, but in the case of other, e.g. Moradabad brassware, the middlemen have just tried to copy the catalogues of imported articles and keep the shape of utility articles without adapting their designs to a particular shape, or without maintaining quality and workmanship in the production of such utility articles. Naturally, the results have been far from happy.

(ii) Along with designs comes the problem of standardisation. There is a grievance of consumers against cottage workers that the latter do not maintain quality or standard or workmanship. There is a general tendency amongst the workers to copy a design or shape which becomes popular but to make it cheaper by deteriorating the quality. For instance

in the case of handloom the colour scheme is copied with the help of yarn which is dyed with dyes and the quality and structure is deteriorated. This deterioration of structure is again done in two ways. First by reducing the number of threads and secondly by using inferior yarn. The complaint is justified but the guilty person is not the cottage worker. He can produce what he is paid for. The real cause of this practice is the attempt on the part of the *sahukar* to offer a lower price every time the product of the same design is offered to him and he does not make this reduction merely because the price of materials has gone down or because the cost of production has lowered, but generally on an arbitrary basis to ensure greater profits for himself. The result is that the worker tries to make up his earning by deteriorating the quality. This vicious circle goes on repeating and results in complaints of above types. Any investigation in the problem will bring out this dangerous practice very prominently and it would be no exaggeration to say that this problem by itself is fundamentally a very vital problem.

6. **Finishing**—One of the chief defects in regard to the marketing of the products of cottage industries is lack of finish. Articles may be durable but they have to be sold at lower price on account of this defect. The modern public values appearances more than durability. This defect is very marked in the case of textile fabrics. The fine *garha* at some of the centres when bleached and calendered can successfully compete with longcloth with a little extra expenditure over finishing. Similarly dyeing and merely calendering completely changes in many cases the appearance of the cloth. In the case of blanket if it is milled by machinery and raised and pressed, it fetches a price higher by about fifty per cent. although the expenditure involved is very little. Similarly tanned leather requires certain glazing and pressing and also splitting. There are machines for all these processes and some of the tanners in Kanpur take village tanned leather and finish it with the help of machines to their profit. Some of the East India Kips and cheap skins of Madras used to be exported to foreign countries merely to be finished. They were brought back after being finished to be sold in the Indian market. In order to help local industry and stimulate local enterprise the Government of Madras have leased out their glazing plant at the Leather School, Madras, to a local firm, whose glazed leather is finding a good market now. In the case of metalware as well considerable amount of labour is spent in beating articles into shape. The shapes are not always perfect due to the effort on the part of the *mahajan* to get the work done as cheaply as possible. These articles are subsequently engraved or embossed or lacquered as in Moradabad. Very often a good deal of fine and artistic work is wasted on a crudely shaped article. The modern demand for plain finish or geometrical patterns requires that certain processes should be done correctly by machines or special appliances to assist the hand work. The main reason why the cottage worker has not taken up these appliances is that most of them are not small enough to be installed in a cottage or small workshop or he has not the means to buy the same. It has been seen that where an industry has localised, many enterprising parties have installed appliances, e.g. calendering plant at Tanda (Faizabad) and Mau (Azamgarh), leather finishing plant at Kanpur and die punching and pressing plants at Aligarh. The difficulty in this connection becomes very acute with change in designs and tastes that must be solved in order to sustain the cottage industry. It has also been seen that where special arrangements have been made for finishing, a certain amount of standardisation has also been possible. We have already stated

that want of standardisation is one of the major difficulties in cottage products. Whatever may have been the advantage of extreme varieties in the olden days of self-sufficient village units, with the developments of means of communication, demand for standardisation and bulk production is inevitable. Efforts made by the United Provinces Government and the contractors of the Supply Department to get the articles made for the defence services according to prescribed specifications have clearly shown that with organisation it is possible to remove this complaint of want of uniformity and standard of quality in cottage products. We, therefore, feel that this complaint against cottage worker of want of uniformity and lack of standard and good finish, is now a very serious problem and requires systematic attempt for solution. The solution of the problem deserves high priority.

7. **Marketing**—Marketing is the most essential problem that needs effective solution, if cottage industries are to prosper. Even the first Industrial Commission of 1916-18 did not fail to emphasize this fact. They said "where greater market has been created, the artisans have almost invariably sought of their own initiative to improve their means of production." It can be said that if the marketing problem is solved, other improvements will come up of their own although we do not mean to suggest that the solution of other problems can in any way be neglected. All the specialised cottage industries will be found to exist at places where market existed, e.g. round about the courts of medieval periods. The loss of patronage to the cottage industries after the fall of the Moghul Empire has been the main reason for their deterioration. The Government that followed had direct interest in trade and, therefore, did not encourage those that were antagonistic to their interest and later became involved in mere collection of revenues and maintenance of law and order, leaving trade and industry alone under the economic theory of *laissez faire*. It is, however, noteworthy that wherever an attempt was made in the past to help indigenous cottage industry, that help came through marketing. Exhibitions were organised in India and abroad and even museums were utilised for the sale of artistic articles. In 1913 the United Provinces Government started the "Village Industries" which has gradually developed into Government U. P. Handicrafts. We do not hold that the assistance given by the Government was either effective or adequate but we do recognise that the real problem had at least been appreciated by the Government in the past. The difficulties in marketing are linked with the difficulties in finance. The cottage worker has to depend upon his *sahukar* in this case also. He is usually not aware of the place where his goods can be sold at an advantage and even when he is aware he is helpless because marketing outside the local market is beyond his means. The result is that the cottage worker has either to hawk about in the local market in the evening after the day's work or sell it to the *sattiwala* or local dealer at the best price he can get. The reason is, as has already been stated by us in the previous paragraphs, that the cottage worker is helpless for want of adequate finance. In the case of marketing far too many middlemen operate which increases the cost of distribution considerably and thereby reduces the prices realised by the actual producer. At important places there are *dalals* or negotiators who in their turn are attached to bigger concerns of commission agents. These commission agents, however, work both as financiers as well as commission agents. For instance in the handloom industry at Mau, the *sattiwala* has his own shop where the *dalal* brings the weavers. The *dalal* charges his fee from the weavers and a little from the *sattiwala* also. The *sattiwala* poses to be merely a commission agent when outstation buyers come

to him though it is never so. The outstation buyers make no attempt to go direct to the weavers because in the first instance they do not know what they will get from them and in the second place they cannot get any financial accommodation from the weavers. All this operates against the introduction of designs and improvements in quality and standard which we have described in the previous paragraphs. The wholesale dealers themselves are not financially very strong and they do not employ modern business methods of advertisement and propaganda. They want quick return of the capital invested and want to minimise the risk undertaken by them in purchasing the products. They have, however, a great advantage in the fact that the demand in many cases is seasonal while production has to be continued throughout the year. Those who can afford to invest, reap a good harvest in what is called the dull season, although it is maintained by them that they render good service to cottage workers who otherwise would be seriously handicapped for want of market especially in the off-season. All other problems of cottage industries hang round the marketing problem, a solution of which alone can lead to the effective solution of others.

8. (i) **Taxation, transport and other problems**—Complaints have been made to us that the local bodies levy taxes in the shape of octroi or taxes on goods and income, in a manner which hits the small man. At some places the raw material is taxed and so also the finished goods. Local bodies have to understand that it is the prosperity of the people living within their jurisdiction which is responsible for the prosperity of these institutions and, therefore, they must give every encouragement for the development of different industries, both in self-interest as well as for the well-being of workers. Moreover, the policy of taxation cannot be left to the discretion of these bodies. Octroi is levied in a number of ways and its onerous burden is extremely high in certain cases. We recommend, therefore, that all taxes should be examined in detail by the Provincial Government and where they are found to be detrimental to the development of industries, they must be abolished. Besides local duties, the cottage worker has often to suffer on account of duties imposed by the Central Government for the benefit of the industry as a whole, e.g. duty on yarn, duty on finished leather, etc. It often happens that the finished product of large industry is only the basic raw material of the cottage worker and very often the interest of a large scale industry is given preference to that of the cottage worker on the plea that with the development of production of his basic material by the mills in the country, he will be ultimately benefited. This has not always worked to the advantage of the cottage worker because the long time that the mill industry takes to stand on its leg is a trying period for him and often causes unreturnable loss to him. The handloom weaver for instance has not yet benefited by the production of the cotton mills in India.

(ii) **Transport**—The cottage worker is unable to take advantage of the special transport rates which are devised on the basis of the bulk business offered by an individual customer. There are special station to station rates. There are rates based on the method of packing, especially when the article is bulky. For very obvious reasons the cottage worker is not able to take advantage of these facilities. It is found that although a particular centre of cottage industry despatches considerable quantities of material from the place, it has to pay very high rates on individual consignments and not on the total quantity sent from a particular place. Similarly it is stated that although there were cheaper place to place rates, advantage

could not be taken of that because the bulk of the individual consignments were small. Similarly cottage workers cannot take advantage of telescopic rates for long distances. For instance it often happens that the railway freight for an article from Bombay to Lucknow is proportionately much lower than from Sandila to Lahore. It has rightly been complained by the cottage worker that such rates give protection to large scale industries against the cottage industries.

(iii) Advantage of place to place telescopic rates is also not derived by the cottage worker in the matter of yarn and other manufacturing raw materials. For instance, place to place rate for materials is much lower from Bombay to Kanpur but it is higher for a place like Sandila or Khairabad. The result is that the cottage worker has often to obtain his material from convenient places like Kanpur through a small dealer instead of getting it direct from the ports. This is an avoidable burden on him and results in a serious disadvantage to him.

9. Power—The question of power has been dealt with in the next chapter.



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CHAPTER IV

TERMS OF REFERENCE

Terms of Reference no. 1

"A general all-round survey of Cottage industries and Small Factory Industries of this Province and in particular, the influence of the war on these Industries and the steps necessary and possible to stabilise the gains, if any, of these Industries arising from the war."

1. We have described in the preceding chapters the condition of cottage industries and some of their difficulties. Their condition during the war, has also been described, where possible. Government have asked the Committee to examine what steps would be necessary to stabilise the gains of these industries arising from the war. We have found that the war has both assisted and hampered cottage industries. Some of these which depended upon the use of imported raw material and on export trade suffered very badly, e.g. carpets, handloom weaving, Moradabad brassware, prints, etc., while others which could be utilised for producing articles of necessity for the war flourished on account of employment in the execution of war contracts. These industries, however, were not duly organized and placed on a stable footing. They were mostly exploited to meet the immediate needs of the war only.

2. We cannot describe in detail the effect of war on cottage and small scale industries, because the Supply Department could not give us any figures of supplies obtained by them from small scale and cottage industries in this province. We have, however, given in Appendix II all supplies made by the Industries and Co-operative Departments. The most important gain is that it has infused into the mind of the cottage worker the needed consciousness and removed considerably his inferiority complex. He has realised his strength, if only he works in an organized and combined manner. It has been possible for the contractors to obtain supplies from the remotest villages. Where processes were such that work in karkhana was inevitable, development of large karkhanas, or work under big sheds or concentration of a number of karkhanas, in an area has shown the strength that lay in this method of organisation. The cottage worker has learnt how to conform to specifications by a little effort by the use of simple templates, gauges and similar devices. The instruments and appliances were improved so as to ensure production according to specifications, e.g. fitting up of take up motion in the looms for weaving and above all he was supplied with suitable partially fabricated parts to save his labour in fabricating the parts himself. In metal and leather industries, this system worked well. Even the ordnance factories utilised this system. They sent out parts for fabrication. The worker was thus saved from the bother of selecting his raw material. The maker of parts was similarly saved from the bother of selecting raw material and could concentrate on his work.

3. The Committee regards the sudden abandonment by the contractors and even by the Provincial Government of the organisations for the manufacture of various articles during the war as very unfortunate. The interest of the contractors was extremely temporary. They were not interested in leaving any permanent organization behind. Even the Government worked as contractors and the Committee could get no satisfactory

reasons from the Industries Department for giving up the big blanket scheme and lock making scheme which they had launched on such a large scale. There is no reason why one or two more production centres could not be organized as has been done during the period of war. Similarly some of the machines installed for supplying pre-fabricated parts at Aligarh could have been retained to form the nucleus of a co-operative workshop for feeding cottage workers.

4. The gain from the war, besides the financial gain by those who profited by it, has been invaluable from the point of the experience gained by the worker whose standard of work has definitely improved. He now expects better return for his labour and better opportunity for expansion. In the opinion of the Committee, he is as much a problem as demobilised soldier and the Committee has appreciated a reference on this point by Government.

5. The Committee has considered the above problems created by the war and has suggested the necessary remedial measures, which are embodied in a subsequent portion of the report.

Terms of Reference no. 2 •

"The part which Cottage and Small Factory Industries can play in the Post War Industrial organization of this province and, in particular, the extent to which it is possible to make Cottage and Small Factory Industries complementary to large scale industries."

6. The Committee considers it necessary to deal with the second term of reference once again although in its recommendations it has suggested methods which in its opinion are possible for the development of cottage industries. They maintain that cottage and small scale industries can play an important role in the Post-war Development of this province. These industries are much more important than large scales industries especially from the point of view of the persons directly benefited by them. It is but natural that they should continue to occupy the place of pride in the economic structure of the province. They are best suited to give employment to the largest number of people, especially subsidiary employment to the main industry of the province i.e. agriculture. It has rightly been said that cottage industries are best suited to the genius of our people. Small scale industries also deserve attention for similar reason.

7. (1) The Committee considers it futile to discuss whether cottage industries should or should not play an important part in the development of our industries as a whole. Cottage industries existed and exist even now on a very large scale. Their vitality and usefulness has been proved. Our plan should, therefore, be to develop them and to help them because by doing so we would be assisting the largest number of industrial workers, in urban as well as in rural areas. We have suggested the means of development in our proposals farther on and we do not propose to discuss this point at this stage in any detail. In discussing the above problem, we have given indication as to how it is possible to connect large scale industry with cottage industry, but we wish to make it clear that from our point of view the cottage industry and large scale industry should be utilised to assist each other in the various processes of manufacture. The Committee feels that there should be a large number of purely yarn producing mills, the only job of which should be to produce yarn of different varieties suitable for the handloom weaver. Similarly the existing mills should be compelled to set apart a portion of their yarn exclusively for handloom

weavers. These mills should take special interest in supplying yarn for warp and weft to enable the handloom weaver to introduce numerous designs. The yarn should be in such a form as to be most handy to the handloom weaver for laying out his warp and for filling his bobbins. In Madras the spinning mills, specially the Madura Spinning Mills produce yarn of every variety including ornamental yarn and they even spin yarn of lower counts from higher mixings when needed by handloom weavers and establishments. When needed they are also ready to provide technical advice and assistance to weavers, who are their customers. It will be of great help to weavers if similar facilities could be provided in this province as well. Similarly there can be developed finishing factories for handloom products, the only job of which should be to improve the finish of the products of the handloom weaver. These factories would, therefore, take more active interest in giving guidance to the handloom weaver. The assistance which these factories whether owned by capitals or by the state or by the workers themselves, can render to the cottage worker is, that concentrated expert knowledge of large scale production would be available for the guidance of the cottage worker. The point we want to bring out in this chapter is that although it is necessary to get assistance from the large scale industry, the cottage industry shall not be subservient to our entirely dependent on it.

(2) It has come to the notice of the Committee that cottage industries have been adversely affected in many cases as for example Textile by the unsympathetic treatment of large scale industries. The Committee therefore, does not wish to make the development of small industries dependent on their being supplementary or complementary to large scale industries. It feels that the small scale industries must be developed even if this development is antagonistic to large scale industries.

Terms of Reference no. 3

"Nature and extent of possibility of the application of the Co-operative principle to the cottage and small scale industry."

8. (1) The Committee agrees with all other committees that have so far been formed to go into the problems of cottage industries that the salvation of these industries lies in their total co-operative organization. It is admitted by the Committee that experience in regard to this in the past was far from encouraging, but there is no other way to assist the largest number of cottage workers and to make them strong and self-sufficient. In unity lies strength and this unity can only be obtained by this old and universally tried method, i.e. co-operation. In the opinion of the Royal Agricultural Commission "if co-operation fails, there will fail the best hopes of India." The Committee admits that in other countries the workers have the advantage that they are better educated and have greater confidence in their own Government while our countrymen are illiterate and steeped in ignorance which is a serious drawback.

(2) The co-operative organization of producers of finished articles can be linked up with the co-operative organization wherever possible of producers of raw materials. Similarly finance can be organized on co-operative lines. The Committee, therefore, holds that there can be no limit to the extent of application of co-operative methods. It agrees that the methods of co-operation have got to vary for each industry and for each locality. It has rightly been stated that ordinary type of co-operative societies may not be successful in relation to industries that are called artistic, but it is not a valid reason for leaving them alone. It is possible to bring them within the fold. The

artistic worker wants to be humoured as far as his artistic quality is concerned. Some experienced craftsmen would like a little appreciation of their skill and not merely checking of the specifications and payment of wages. The Committee suggests that in the case of artistic industries, the co-operative system should be introduced through marketing societies. The state should organize societies, finance them and supply them with technical knowledge. Superior craftsmen known as *Ustads* should be associated with marketing societies and should be the judges of the workmanship and quality of production of the members who utilise these societies for the sale of their products. It is not proposed that Government should finance every co-operative society but the Committee does think that Government will have to run a few societies at selected places till this method succeeds. Besides this there is another factor which militates against co-operative organization of artistic industries. Raw material is usually expensive and cottage workers do not always buy raw material themselves. They get the raw material from the *mahajan* or the master craftsman. All processes are also not done by the same craftsman at the same place. There is division of labour and therefore, there has to be a master craftsman or some middlemen who gets the work done by different classes of workers. This is very common in Moradabad ornamental brassware and in Lucknow 'chiken' work. The co-operative marketing organization suggested by the Committee will, therefore, be the main organization for the production also in such industries as the *Mahajan* is today.

9. **Compulsory membership**—The Committee has given very anxious consideration to the views expressed by one of its members, that compulsory enrolment of workers into co-operative societies should be attempted. That it is very desirable, is admitted, but the Committee proposes that compulsory membership should not be the beginning any where so long as the intellectual level and social and economic order is not fundamentally altered. The principle of compulsion militates against the very idea of co-operation and would in the present state of things tend to stiffen opposition on the part of workers. The Committee, therefore, proposes voluntary organization into self-sufficient societies or into societies of wage earners where the processes of production are such as to render it impossible for the individual worker to work as a self-contained productive unit. Another important suggestion with which the Committee agrees, is that the craftsman who is himself a producer and acts as a *dakal* or a small dealer in the initial stages of marketing, should be brought into the fold of the co-operative organization of workers.

10. The Committee has examined the observations made in this connection by the Fact-Finding Committee Handloom (and Mills) regarding the largest cottage industry i.e. cottage handloom weaving. The Fact Finding Committee held that co-operation had not been very successful and they attributed this to the fact that the movement was not built on proper foundations. They emphasized that it was not enough to find money at low rates of interest. The co-operative societies must render the services which the weavers and merchants get from the *Sowcars* in the matter of supply of yarn and sale of finished goods. Another very important point brought out by the Fact-Finding Committee is that the co-operative societies do not start functioning under proper guidance. They attack problems on theoretical principles. They attempt to save the weaver from exploitation by *Sowcars* without first trying to replace the *Sowcar*. The result is that the *Sowcar* is violently antagonised and concentrates his energies on destroying the organization. The workers on the

other hand are dissatisfied when they find that they do not get the facilities which they had been getting from the Sowcars. The Fact-Finding Committee suggests that "there is considerable advantage in utilising the professional merchants in the marketing transactions." The Committee's experience is similar and it agrees with these observations of the Fact-Finding Committee. But it has to be emphasized that the problem of assistance to the cottage workers has to be tackled with only one object in view i.e. to replace the existing organization of Sowcars by similar self-supporting and readily available agency for all-round legitimate assistance in the business both of production and sale. The Committee wishes to emphasize one important fact which a hide bound state organization always neglects, i. e. the human touch. The worker gets many facilities because of his personal influence with the Sowcar, when there is illness in the family or marriage or festival. The society should also have provision to tackle these problems of the worker. It is not enough to say that the accounts are not ready and therefore, payment cannot be made or that one Secretary cannot run about looking after the comforts of members. The Committee holds that it is possible to evolve a system by which these facilities can be given.

Terms of Reference no. 4.

"Technical improvements that are possible with particular reference to the use of power. It would be helpful if the amount of the power that can be consumed can be indicated in each case."

11. Need of employing power in Cottage Industries—In the present machine age the need of power in production cannot be over emphasized in cottages. It is not the labour saving machines that we require so much but we do want to have machines which will add to the efficiency of human effort and eliminate sweating. Grinding, oil-extracting, centrifugalizing, evaporating, carding and ginning machines and the like will have to be introduced to replace our crude methods and tools employed at present. We do require small Ghanies worked by power for extracting oil, centrifugal machines for making sugar, small gins for carding machines both for cotton and wool, spinning machines for preparing yarn and raising and finishing wool for calendering machines for finishing cloth and handy machines for reeling silk, drawing wires, extracting fibre and the like. The extent of electric power required for operating various farms and industrial machinery, etc., commonly employed is described in Appendix III at the end of this report.

12. Basic principle for electricity rates for industries—It is difficult to lay down electricity rates for different classes of consumption covering agricultural, industrial, heating and domestic and lighting purposes, etc. as their determination depends on a large number of factors which again would vary with individual projects. The Committee, however, would like to lay down a broad principle which in our opinion should govern the tariff policy of the Government in respect of the supply of electricity to the Farm and Cottage workers etc., for the economic development of cottage industries and as a matter of fact for any industry it will be necessary to ensure that the rates applicable are such as will be competitive and within the capacity of the industry for which they are offered. In Japan the cottage workers obtain electricity supply at an average rate of two pies per unit.

13. Workers dwellings unfit for electrifications—While the Committee recognizes the need of mass electrification of our villages we would wish to draw the attention of the Government to the fact that the common man

has neither the means for suitable dwellings and work-houses to employ electricity for his comfort and for his work. In fact the average village house may hardly be accepted fit for living, in its present form of construction it may not be considered even safe for electrification. The Committee feels that a planned building programme for the rural areas may have to precede the mass electrification of our villages.

14. Uniformity of rates—Uniformity of rates all over the province for cottage industries and farming, etc. should be enforced as far as practicable.

15. Procedure, terms and conditions of electricity supply in rural areas—The procedure, terms and conditions of supply of electricity should be simple and easily understandable by the common man. The procedure as adopted by the Hydro-electric Department at present is extremely cumbersome as it generally involves a long drawn out affair covering several months of protracted correspondence etc. Such a procedure has to be simplified. It will not be out of place to mention here that in Japan there is no guarantee of minimum revenue on loads up to 40 h. p. We feel, therefore, that the imposition of an annual guarantee and a high initial cost of installation, etc. are not conducive to the growth of small scale industries. The Committee would suggest a revision of terms and conditions of supply on a more liberal basis from the point of view of encouraging the use of electricity by the small producer.

16. Functions of research and experimental organization—The Committee has discussed at length elsewhere in this report the necessity of research and experimental work for finding out new processes that could be successfully adopted by cottage workers for Agricultural farming and other industries and such research and experiments should include matters relating to the best use of electricity.

17. Improvement of designs of tools etc.—Such investigations will, amongst others, also cover the study and design of electrical apparatus, and other implements required to improve the workers' efficiency and quality of work.

18. Horizontal diversification in industry—It will also be the duty of this research organization to investigate and study trades, industries and process which could be complementary to each other so that the village farmer and cottage workers could adopt them with advantage as supplements to their main occupation by keeping their labour and plant fully employed every day and all the year round. This may be illustrated by the example of a farmer with a 10 h. p. tube-well motor utilizing the same load for sugarcane crushing or bone-meal manure through the different seasons of the year. It will thus be seen that through judicious understanding of the importance and needs of different industries and processes the farmer can be advised to avoid putting too many eggs in one basket by producing an undue variety of products.

19. Vertical diversification in industry—Of no less importance to our cottage workers in the rural areas will be the study of different stages of the industries and processes in their vertical diversification. Vertical diversification aims at prosperity by carrying the processing of any raw product as far as possible to the consumer stage on the farm etc. This is unconsciously done by the farmer who separates his cream and sells it on a relatively high figure, and by the farmer who dries his grain and stores it for calculated sales. Another group of farmers may go so far as to process grain into cereal flakes ready boxed for the breakfast table.

20. **Committee of technical experts**—In view of the possibility of large scale electrification of rural areas in the province, not in the distant future as recently announced by the Hon'ble the Minister for Communications, the Committee would like to impress upon the Government the necessity of setting up a small committee of departmental experts to evolve a constructive scheme for development of electricity operated yarn spinning units capable of being worked in cottages for the production of such quality and grades of yarn as are required for the use of the masses in the country side.

21. **Development of small power yarn spinning units**—It is generally agreed that the manufacture of finer counts of yarn has to be left over for the large Textile manufactures which cater mainly for the consumption of the urban populace.

22. **Development of small power looms**—The Expert Committee suggested above may consider a suitable and cheap design of power loom capable of weaving the above grades of yarn which the worker could handle with ease in his own cottage with the least amount of outside aid.

23. **Electric accidents**—In view of the number of accidents from electric shock that one so often hears in our existing state of expansion when we have hardly touched the fringe of our ultimate development in the matter of electrification of the province the Committee feels much concerned and would stress the urgent need of setting up a suitable machinery to educate the public in general and the village countries in particular on the safety measures to be adopted to avoid dangers to which people expose themselves by meddling with electric lines and other equipments.

24. **Utilization of spare man power and electricity**—The Committee also wishes to draw the attention of the Government to the advisability of employing (a) the spare electric power with which the development of electric irrigation pumping will be available in much larger quantities during monsoon months in the areas covered by Hydro-electric Stations and (b) the vast number of Farm-workers who have hardly any work during this period. The immense potentiality of this seasonal reserve of electricity and man power could in our opinion be directed into profitable channels by developing and introducing new uses, processes and industries.

Terms of Reference no. 5

"The possibility of applying to these (cottage and small factory industries) the provisions of the factory Act with a view to avoiding sweating."

25. (I) Much information in regard to actual conditions of labour in cottage and small factory industries was not available. It was the report of the Royal Commission on labour, published in 1931, which could be tapped as a source of authentic information. In Chapter VII of the report the Commission has dealt with the question of unregulated industries and give an account of labour condition in some important industries such as, Mica Factories; Wool cleaning; Shellac Manufacturing, Durrý making, Carpet making and Tanneries. The conditions in these industries are hardly different now and were described as being very unsatisfactory, specially in regard to sanitation and the health of workers, particularly of children. The Labour Investigation Committee, appointed by the Government of India, have recently conducted some surveys of small scale and

cottage industries, but these reports are not yet available. The United Provinces Labour Department has also conducted enquiry into labour conditions in Brassware Industry in Moradabad. This report, which has been published by the Department of Economics and Statistics, supplies useful information, so far as the Moradabad Brassware industry is concerned. While information of this type is not available in respect of other cottage and small scale industries in the province, it can be said without any fear of contradiction that the conditions in Moradabad Brassware industry are typical of conditions in other industries.

(II) The following two types of industries were considered as non-regulated industries by the Labour Commission—

(i) Those which use power but do not employ twenty persons or more.

(ii) Which do not use power.

(III) The Commission recommended the application of the whole of the Factories Act to the factories of the category, and the enactment of a separate Act, providing the minimum age for employment of children to be ten years, as one of the provisions. No legislative action has been taken by the Government of India to implement the Commission's recommendation for a separate Act. Only the Central Provinces has done something to regulate labour in unregulated factories.

26. (I) In 1938 "The Employment of Children Act of 1938" was passed and subsequently amended in 1939 by the Central Government. This Act as amended, prohibits the employment of a child who has not completed his twelfth year, in any of the occupations mentioned in the schedule, which contains the process given below:

(1) Bidi making, (2) Carpet making, (3) Cement manufacture, (bagging of cement), (4) Cloth printing, dyeing and weaving, (5) Manufacture of matches, explosives and fire-works, (6) Mica cutting and splitting, (7) Shellac manufacture, (8) Soap manufacture, (9) Tanning, and (10) Wool cleaning.

(II) The annual report of the working of Factories Act for the year 1944 stated that due to insufficiency of staff, the Act could not be enforced rigidly.

27. The amended Factories Act of 1940 extended the provisions regarding health, safety, hours and conditions of work relating to children and others to small factories, which employed ten or more persons and used mechanical power. Due to lack of staff this legislation could not be enforced in the United Provinces for several years. Through a notification in January 1939 the Government of the United Provinces could make the Factories Act applicable to all premises working with ten or more workers with power but it decided rather to regulate a small number of concerns effectively than to apply the Act to all such concerns. The Act was extended to :

(1) Printing Presses, (2) Motor Garages, (3) Engineering Works, (4) Glass bangle cutting factories, (5) Ginning and Pressing factories, (6) Ice factories, and (7) Brass Metal works.

28. From the above survey it would be seen that while the Government has been earnest in trying to regulate the small and cottage industries, the inspecting staff has been too scanty to enforce effectively the provisions of the Acts. In matters like these the Committee considers that it would be unwise to take any drastic and sudden action.

The Committee is, therefore, of the opinion that the Provincial Government should make the fullest use of the powers conferred by sub-section (1) of section 5 of the Factories Act, 1934, and should extend the Factories Act to all manufacturing establishments employing ten or more persons and working with or without the aid of mechanical power. For this purpose the following classes of industries should be selected in the first instance :

- (1) All places where the process of tanning or manufacture of leather or leather goods, or articles is carried on.
- (2) All places where the manufacture of good product is carried on.
- (3) All places where the process of dyeing, printing, spinning of yarn or weaving of cloth is carried on.
- (4) All places commonly known as saw mills or wood-works where the process of cutting or otherwise treating wood is carried on.
- (5) All places where the processes of extracting oil is carried on.
- (6) All places where the process of cleaning, milling or otherwise treating rice, dal or other grain is carried on.
- (7) All places where the process of manufacture of lime and surkli is carried on.

29. (1) In this connection the Committee feels that the Government would do well to take their cue from the speech which the Honourable Dr. Ambedkar, Member for Labour, Government of India, delivered on November 26, 1945, at the seventh Labour Conference held in New Delhi. The Committee is definitely of the opinion that "The lack of Machinery is too weak a plank to stand on."

(II) The employment of the Children Act should be extended to the brassware Industry of Moradabad. For the purpose of extending the Act to other similar industries, it is suggested that investigation may be conducted in respect of other industries.

30. The Committee is of the opinion that while in the case of small scale industries, it might be advisable as well as possible to enforce the Factory Act in some way, in the case of cottage industries it would neither be advisable nor possible to enforce Labour Legislation for the following reasons :

(1) A vast majority of cottage industries are run by artisans without the aid of paid labour, and mainly with the help of the members of their families or relatives, or they are part-time occupations of the cultivating classes. These self-employed persons do not stand in need of protection at present when a large class of wage earners are without any legislative protection, e.g. shop assistants, transport workers, workers engaged in the building industry and other casual manual labourers. In some advanced countries Labour Legislation covers all classes of wage earners. In course of time we too may have to enact similar legislation. The question of improving the lot of agricultural labour is also receiving attention. So long as this is not done, it is unnecessary to touch cottage industries.

(2) The cottage industries are so many and so widely scattered that it will be impossible to enforce any labour legislation pertaining to them. As and when a legislation for agricultural labour is enacted the question of administering legislation for cottage workers may not present serious difficulties. So this question has to be deferred for the present.

31. Though the Committee is not in favour of legislating for cottage workers at present it is of the opinion that this question cannot be ignor-

ed altogether. It is difficult to resist the impact of world forces. The latest development in social legislation is to cover all classes of people and even self-employed persons, who are beyond the pale of social legislation, are being considered fit subjects for inclusion in various statutes, e.g. social security scheme of the United Kingdom and New Zealand. Even the hours of the work of domestic servants are being regulated in certain countries. Moreover, with the dispersal of industries into rural areas we may have a class of employers engaging a few workers and carrying an industry on cottage lines with a view to avoiding labour legislation. So taking a long view of the problem a time may come when the question of extending labour legislation to cottage industries may also assume serious proportions. To be prepared for that eventuality and to decide this question on a scientific basis it is necessary that an enquiry into labour conditions in small scale and cottage industries as suggested above be undertaken and if the results of the enquiry show that cottage workers need any protection the question may be decided on its merits when more factual information is available.

32. The Committee feels difficulty in prohibiting workers combining under co-operative societies from employing their own children as they do help now in small operations. Such work gives them training, enjoyment and a little financial help also. If we prohibit the employment of children in co-operative enterprise, it may discourage the formation of Industrial Co-operative societies. In any legislation, therefore, such co-operative societies may be exempted but they should not be allowed to employ children other than their own in their works.

33. To sum up, the Committee is of the opinion that the Factories Act can be applied to only selected small scale industries for the present. These have already been mentioned in paragraph 28, page 42. Gradually other small industries may be included. In regard to cottage industries, there should be no legislation for the present.

नमो भगवते वासुदेवाय

CHAPTER V

RECOMMENDATIONS

1. **General**—Some indication of the lines on which the problems of the cottage and small scale industries could be tackled has been given in the previous chapters. We endorse the views expressed by the Cottage Industries Committee set up in 1934 by the U. P. Government that "It is a mistake to attack any one aspect of the problem and that if success is to be achieved a comprehensive policy of assistance is necessary". We wish to emphasize the idea underlying our recommendations to raise the standard of living of the workers and to find work for agriculturists and others during their idle hours. The organization which we suggest to be put up to watch and promote the interest of cottage and small scale industries will conduct regional surveys of the extent of spare hours of agriculturists and others and the possibilities of finding work for them taking into account the industries that already exist there or could be usefully developed. While making this suggestion the Committee has in view the system that is said to have been followed in Japan of utilizing the members of families of workers for certain operations necessary for completing the production of an article as for example, making of boxes of matches or labelling or hand stitching of table cloth etc., etc. We hold that it is possible to find employment for the unemployed or partially employed men and women in rural areas by linking them up with organized plans or production by means of cottage and small scale industries.

2. **Education**—The Committee holds that industrial subjects specially cottage and small scales industries do not get a place in the educational text books that are used either in the primary stages or even in the higher stages. We recommend, therefore, that the text books including the books of alphabets for children should give an industrial bias. The books of alphabets should have symbols to divert attention to things connected with cottage and small scale industries. Similarly simple stories should describe interesting things about cottage industries and agriculture. Such text books are recommended specially for adult education.

3. **Museums**—We propose to have museums or small show rooms where samples may be collected of improved articles and models of improved processes. There should be an arrangement for giving talks at these museums for the benefit of workers in that locality specially in the evenings.

4. **Libraries**—There should be libraries attached to the museums containing specially illustrated pamphlets pertaining to industries.

5. **Technical training**—(I) There should be arrangement for the technical training of the workers actually engaged in industries. The basic method of training is by means of holding tuitional classes, some of which exist in India. They are to be multiplied and their scope enlarged. We do not mean to suggest that the travelling classes should be used as schools with a regular curriculum. These schools should be established themselves with their appliances in a locality and train workers in the improved processes. Their main object should be to solve the difficulties which the cottage workers experience. The Committee is of the opinion that the tuitional classes, as a few of them have been working so far,

have not achieved tangible results. In the opinion of the Committee this is due to the fact that they were started merely for training and no arrangements were made to follow up the worker's training. The Committee is of the opinion that these classes should be linked up with any organization that may exist or which the State may put up to develop a particular industry in that locality.

(II) The regular training Institutions of the Industries Department both the so-called I and II class should have facilities for training of part timers who may seek assistance in learning the use of the important appliances.

6. Recreation—Along with education there must be arrangements for the recreation of workers. It has been found that workers indulge in habits which are injuries to health and morals and also to their financial resources. The workers should therefore, be provided with facilities for healthy recreation as the efficiency of a worker greatly depends on the proper use of his leisure. The committee proposes that arrangements should be made as a part of a distinct scheme of recreation for healthy life. Along with these methods of recreation we must develop physical culture specially for the younger generation of workers.

7. Improvement of technique—(I) We have described that tutorial classes would train the workers but in the opinion of the Committee the technical problems of the cottage and small scale industries cannot be solved merely by these classes. It is therefore, recommended that complete arrangements for experiments in research and introduction of designs should be made in the Technical Institutions of the Department of Industries. These institutions should have adequate staff and complete equipment for research in experiments besides whatever staff and equipments they may have for their regular training work which they are doing at present, or may be required to do in future. The research and experiment section of these institutions should concentrate more on the solution of the day-to-day difficulties of the workers and trial of appliances and processes which have been already evolved at their places than on pure original research. They should have facilities to put up the latest appliances to try them and to modify them so that they could be easily used by the cottage or small scale man.

(II) Along with research and experiments these Institutions should have facilities for the evolution and introduction of new designs. For the evolution of new designs the Committee proposes to utilise the Government School of Arts and Crafts and those specialised organizations which exist both in India and abroad. The Committee also proposes that provincial competitions should be held for designs and the all-India institutions known as the Institution of Art in Industry, utilized. Government will have to set apart a substantial sum of money for these competitions alone.

(III) The School of Arts and Crafts is intended to function as a seminary of designs. The Committee visited this institution and while appreciating the good work already done by it, it feels constrained to remark that it is not fully equipped to discharge its primary function even. The Committee therefore suggests that the training staff and the equipment of this institute should be completely reorganized. The Committee is of the opinion that the low paid staff that is at present being employed cannot be expected to evolve designs nor to give even proper technical training to the students who are expected to become designers for industries. Besides reorganization of schools for training, the

Committee is of the opinion that these schools should have at least a few expert designers for some of the important industries of the Province like textile and metalware. These expert designers will not only train the boys in a particular crafts but will also contribute original designs for the trade and modify the designs which may be obtained through other sources mentioned above and make them applicable to the needs of the cottage and small scale industries.

8. Designs section in Central Technical Institutions—The original designs evolved at the Government School of Arts and Crafts in the manner described above will have to be translated into actual working cadres. We propose that this would be done at the research and experiment sections of the Central Technical Institutions. These research and experiment sections should have technical designers who will work out the technical details of the designs for actual production, as for instance, setting up the harness to fit the new designs in weaving. The Committee wishes to emphasize once again the importance of designs in the life of cottage and small scale industries. It has recommended elaborate plans for the evolution of new designs but wishes to sound a note of warning that in the evolution of designs the true characteristics of our traditional arts should not be lost sight of. It is for these reasons particularly that we have strongly recommended complete reorganization of the School of Arts and Crafts and have entrusted to it the modification and trials of new designs that may be obtained from abroad and other sources. It may not be out of place to mention that even the large scale industries are now devoting considerable attention to the problem of designs and they have set up associations and societies of designers whose sole duty it is to evolve designs so that the variety may be maintained and the products may be adapted to the varying and developing tastes of modern times. We have already shown that one of the strangest weapons in the armoury of a cottage worker is his ability to produce a variety of designs with the least amount of expenditure. It is, therefore, in the fitness of things that any scheme for the development of cottage and small scale industries should give very prominent place to the proposal for arrangements for the supply of designs to the cottage worker. No expenditure on this subject can in the opinion of the Committee be considered too high and Government should not grudge it. The technical details worked out by the Central Institutions will be conveyed to the cottage workers by means of tuitional classes which we have already recommended in the preceding paragraph.

9. Specialized training—The Committee has noted the present scheme of Government for sending out students abroad to increase their knowledge and qualifications but regrets that the scheme of the Government makes no arrangements for sending out technicians already in a trade or in an industry. The Committee, therefore, recommends very strongly that technicians as well as salesman and commercial travellers should be sent out not only to centres of industries and commerce in India but also abroad. They should be sent out for training in special branches of industries or even for the solution of any particular technical problem. They should not be allowed to go in merely for degrees or diplomas. The Glass Factories at Ferozabad introduced roller system of bangle making by getting one of their artisans trained in Japan. It is needless to add that this training was not arranged in any Institute or through Government agency. The man trained has not only trained others who are today earning between Rs. 10 and Rs. 20 per day but has considerably improved the quality and output of bangles. It is strongly recommended that similar arrange-

ments should be made for training actual workers in other branches of cottage industries in rural areas. The Committee has specially recommended that salesmen and commercial men should also be sent out for specialised training abroad. It considers the training of such men very important for the expansion of cottage and small scale industries. The efforts by Farrukhabad Calico Printers by sending out their representative abroad have achieved very good results and properly organised development of marketing with the help of specially trained salesmen and commercial travellers is likely to achieve better results in other trades as well.

10. Organization of production—The Committee has already expressed the view that co-operation was the best means of organizing production of cottage workers. The basic organization for cottage workers should be a society for purposes of collective purchases of raw materials, finance and collective marketing. The Committee, therefore, recommends that there should be a special programme for the formation of such societies at all centres of production. The Committee has discussed at a later stage the agency to be employed for the formation, co-ordination and working of such societies. The next step should be the formation of Unions of such societies for a given area for each industry. The Unions may be linked up with any other organization which may be the Federation of Unions and at the Centre there should be a Central Federation composed of the Federations of different industries. These Federations at the top should have branches for purchase of raw materials, appliances and tools for all their affiliated societies and for marketing the products of their affiliated societies. In the earlier stages, however, the Federation may be a Federation of Unions of different industries and its branches for purchase of raw materials, etc. may also be joint for different industries. The Co-operative organizations proposed above would require finance. The Committee recommends that there should be a Provincial Industrial Co-operative Bank and funds should be provided to it at low rate of interest by Government and the Reserve Bank of India. It is very essential that the rate of interest at which the basic societies may get the loan should be substantially low as otherwise the Industrial Co-operative Societies cannot succeed. The Committee is informed that at present the primary Co-operative Societies get money at a very high rate of interest from the district Banks and this is one of the reasons why individual workers have not fully utilized these facilities or credit through the societies. The Committee feels that the formation of co-operative societies may not be possible at all places in the earlier stages. The cottage worker is usually ignorant and suspicious of outside interference. It is, therefore, proposed that to begin with there should be no hesitation in starting the work of organization with the help of a group of workers without forming them into co-operative societies. The Committee, therefore, recommends that Government take up this work on the lines of the handloom development centres organized by the Industries Department. The tutorial classes which we have proposed above should also be utilised for preparing the ground work but the ultimate object in view should be the organization of these workers into co-operative societies at the earliest possible moment. It has been impressed upon the Committee that the process of Organization of co-operative societies must be accelerated by recommending to Government for legislation to enforce compulsory membership of the co-operative societies. The Committee, however, holds that a beginning can only be made with the voluntary association of workers into co-operative societies, when a majority of the non-educated workers formed into co-operative societies, are educated, it may

then be the **time** to demand the introduction of legislation for compulsory membership of all workers into co-operative societies.

11. **A separate statutory body and its functions**—The development of co-operative organization envisaged by us in the preceding paragraphs cannot take place without State aid from the very beginning. The Committee examined the development work done for the benefit of cottage industry by the Industries and Co-operative Departments. It has come to the conclusion that the present machinery of the two Departments for the development of cottage industries is inadequate to cope with the magnitude of the work visualised by the Committee. The Committee, therefore, recommends strongly that there should be a separate statutory body set up for the development of cottage and small scale industries. We have not recommended a separate department of Government because of the difficulties that a Government Department has to face in running a commercial undertaking. A statutory body should be created by Government with well defined powers and with sufficient funds to perform the functions detailed below :

(1) Bulk purchase of raw material and distribution of the same to the cottage workers through co-operative societies or development centres under the statutory body.

(2) Bulk purchase of appliances and tools and their distribution.

(3) Development of production centres.

(4) Purchase and introduction of new designs.

(5) Running of tutorial classes to carry out the results achieved in the Central Technical Institute under the Industries Department.

(6) To hold exhibitions and design competitions.

(7) To plan Division of labour in each industry to simplify production.

(8) To set up small units of small scale production and hand over the same to co-operative societies or owners of small industries.

(9) To lay down gradation and standardization of production.

(10) To organize the marketing of the products of cottage and small scale industries.

(11) To send out artisans and craftsmen, salesmen, and welfare workers to different provinces of India and abroad in order to learn improved methods.

(12) Purchase or acquire and sell or exchange any patents, copyrights and inventions for the benefit of cottage and small scale industries.

(13) To obtain and supply finance.

(14) To watch the interests of cottage and small scale industries especially with reference to big industries.

(15) To fix wages according to the skill of the worker.

(16) To watch the interests of cottage and small scale industries in matters of transport and taxation.

(17) To set up suitable machinery to look after the general well being of the worker such as housing, welfare, work, education and recreation, physical and mental development including the provision of libraries and museums.

(18) To take all other steps as may be incidental or conducive to the improvement and progress of cottage and small scale industries workers.

12. **Composition of the statutory body**—The statutory body will consist of the following five members :

(1) Chairman, nominated by Government.

- (2) Registrar, Co-operative Societies, *ex officio*.
- (3) and (4) Representative of Co-operative Societies.
- (5) Member-Secretary, Director of Cottage and Small Scale Industries, *ex officio*.

The chief executive officer of this statutory body will be the Director of Cottage and Small Scale Industries.

13. The statutory body is proposed to perform jointly the function which the Co-operative and Industries Departments are at present expected to perform. It should be invested with the powers of the Registrar so far as they relate to the organization, registration and supervision of Industrial Co-operative societies. It will employ the necessary staff on the lines of the Co-operative Department for this work. All work that is being done by the Industries Department at present in respect to cottage and small scale industries will be taken over by this body. The body will utilize the resources of the Textile Institute of the Industries Department for experiment and research work. This will not, however, prevent the body to set up its own organization for research and experiment if it considers it necessary. The Committee wants to make it clear that the main function of this body in relation to cottage industries will be to develop co-operative organization to perform all the functions beginning with organization and leading up to the co-operative ownership of the organization for the joint purchase of materials, tools and for marketing.

14. **Finances needed**—The statutory body will perform two distinct functions (1) development work which is being done by the Department of Co-operative and Industries and (2) commercial undertakings. The Committee recommends that Government must find funds to meet expenditure over all development organization for all times that this development work goes on. It should further subsidise expenditure on the management of commercial undertakings till such time, that the work grows to a sufficiently big scale to yield profit to cover the cost of management. The amount of subsidy required to cover the cost of management will be fixed periodically say every five years. At the end of each period the contribution will be reduced according to the amount derived from profits. The funds for the commercial operation of the body will also have to be provided by Government in the early stages, by means of loan at the lowest rate of interest possible. Only the amount actually drawn by the body against a fixed target will be taken into account for purposes of calculating interest. In order that the various organizations and stores may be established and run, a cheap and substantial credit will have to be provided by Government. The Government of Madras provided a credit of about Rs.40 lakhs to the Madras Central Weavers' Co-operative Society Ltd. to which were affiliated only 330 weavers' co-operative societies. This enabled the societies to stand on their own legs while the entire money was paid off together with interest. In our province, three main industries may be expected to be taken up to begin with, viz., handloom, leather and metal. For these a credit of a crore of rupees besides suitable grants may be needed.

15. The Committee has already emphasized that this body will develop co-operative organization and therefore recommends that the organization of the co-operative societies should be developed in such a way that the federation of co-operative societies is able to provide funds of its own and take a larger share in the management of activities. There should be provision in the enactment of the statutory body that when such a stage is reached, there should be at least three representatives on the body from

the federated co-operative societies. The Director of Cottage Industries, however, will always be appointed by the statutory body with the approval of the Government.

16. **Director—a live wire**—The first and foremost link in the organization is the Director. He must be a “live-wire, an enterprising and enthusiastic worker”, with a spirit of service and wide commercial knowledge and experience. Upon him will depend the success of the scheme envisaged by the Committee. The Department of Industries has been recruiting Director from Indian and Provincial Services who are subject to transfer and there have been far too many changes on this account. The Committee does not wish to confer the post of Director of Cottage and Small Scale Industries to any permanent service of the Government. Preference should be given to a man from outside the service who has experience of cottage and small scale industries. He should preferably be on contract basis for a fixed period, not more than five years in the first instance so that he may be replaced if found unsatisfactory.

17. It is beyond the scope of this Committee to propose a detailed structure of the organization to be set up to carry out the functions of the statutory body; we envisage that the Director of Cottage Industries will have under him different departments each under a suitable officer. The Department will be :

- (1) Finance and Co-operation, inspection of stores and audit.
- (2) Purchase of raw materials and production including collection of finished material.
- (3) Marketing, Propaganda.
- (4) Establishment, welfare, education and museums.

18. **Advisory Board**—An advisory Board, may be constituted to help the statutory body, with regard to (1) Finance and general organization, (2) Technical Developments, (3) Education and welfare work and (4) Marketing of finished goods and supply of raw materials. It may consist of representatives of the Legislative Assembly, United Provinces, Co-operative Union, Director of Cottage Industries and two nominees to represent interests of cottage industries.

CHAPTER VI

SUMMARY OF SUGGESTIONS

1. **Chapter I—Place of Cottage and Small Scale Industries in the economy of the province**—Improvement in agriculture or development of large scale industries, is hardly a solution of unemployment in the province. Development of cottage industries is the only remedy of our economic ills (paras. 2 and 3, pages 4 and 5).

2. **Chapter II—Survey of cottage and small scale Industries**—Complete survey of all cottage and small scale industries should be made and revised from time to time (para. 1, page 6).

3. In any future enactment to avoid sweating and exploitation, a distinction between the capitalists and workmen societies must be made, so that workers may not hesitate to form themselves into corporate bodies (para. 3, pages 6-7).

4. **Power looms**—No special effort on the part of Government is necessary to introduce power looms in the province. It should be entirely on the initiative of worker (para. 6, page 8).

5. **Silk industry**—Sympathetic, systematic and sustained efforts are needed to produce silk in the province. Research is needed to investigate why silk cannot be produced as cheaply in the United Provinces as in Japan (para. 8, page 9).

6. **Sheep breeding**—Sheep breeding requires improvement and Animal Husbandry Department should look into it. Improvement in clipping and grading of wool is also necessary (para. 9, pages 9-10).

7. **Carpet industry**—It is necessary that there should be some control by Government in carpet industry so that quality may not deteriorate, as is the tendency at present. At least quality meant for export should be maintained (para. 9, page 10).

8. **Hosiery**—Hosiery industry, if properly organized, has the potentiality of capturing the market. Small power machines may be suitably employed (para. 12, page 11).

9. **Leather and leather goods**—There is an urgent necessity to remove the defects in flaying and curing of hides. Proper grading for export and tanning will lead to improvement in tanning industry (para. 13, page 11).

10. **Tanning**—(1) Attempt should be made to grow tanning material and to find out tanning contents of different articles available in the province.

(2) System of reducing tanning period from six months to three months producing the same type of good leather must be introduced.

(3) Sustained efforts to organize workers on co-operative basis would be very desirable (para. 15, page 12).

11. Research in the technical field and organization for distribution in leather industry on the lines of Bata and Flex Footwear are the immediate necessities of this industry (para. 16, pages 12-13).

12. **Glue**—Glue industry needs to be looked after and improved on scientific lines. The whole process has to be so designed that the ordinary workers may take advantage of it and get more money (para. 18, pages 13).

13. **Trunk making**—Supply of punched and shaped sheets will enable the existing centres of trunk making to thrive (para. 23, page 14).

14. **Cutlery**—Arrangement for Central Heat Treatment workshop and introduction of small electric grinding machines and power punching will improve cutlery industry (para. 24, pages 14–15).

15. **Locks**—Proper organization and guidance by Government as done during the war period can help in the improvement of lock industry (para. 25, page 15).

16. **Cupro-nickel and electro-plated wares**—With quality marking of product, it should be possible to raise the quality of cupro-nickel and electro-plated wares (para. 35, page 17).

17. **Glasswares and bottle making**—Introduction of scientific improvements and supply of proper type of glass at cheap rates should prove helpful to the glasswares and bottle making industry (para. 39, page 18).

18. **Glass bangles**—Firms engaged in liquid gold need help and guidance (para. 40, page 19).

19. (1) Before Government instals Central Gas plant for Firozabad Glass Industry, it should examine whether gas should be supplied to the joiners from central generating plant or from the small units (para. 40, page 19).

(2) Selected roller workers should be sent to receive training in Japan (para. 40, page 19).

20. **Glass beads**—Immediate steps should be taken to improve the atmospheric condition of the room where training at glass beads is given at Banaras (para. 41, pages 19–20).

21. **Agricultural industries**—Attempts should be made to popularize agricultural industries among the cultivators and technical help and guidance be given (para. 42, page 20).

22. **Dairy and ghee**—Strong control and legislation against adulteration *Ghee* is absolutely essential (para. 43, page 20).

23. **Oil crushing**—Village Teli will have a better market if co-operative marketing can be organized and pure edible oil is sold in sealed containers (para. 45, page 21).

24. **Saltpetre**—Every effort should be made to develop saltpetre industry and utilize the product in the country (para. 46, page 21).

25. **Honey**—Bee-keeping should be a subject in basic training in honey-producing localities and sale of honey should be organized on co-operative basis (para. 50, page 22).

26. **Chemical Industries**—There should be a section in the Harcourt Butler Technological Institute devoted to development of chemical industries on small scale. Suitable grants should be given to associations interested in the development of small scale chemical industries (para. 51, pages 22–23).

27. **Borax refining**—The possibility of cheapening the price of refined borax made from imported Tibetan borax by refining at suitable place, needs examination (para. 52, pages 23–24).

28. **Soap**—Rural areas should be made soap-minded to create market for soap (para. 54, page 24).

29. **Wood industry**—Use of well seasoned timber and improvement of design, will help the wood carving industry of Saharanpur and Nagina (para. 55, page 24).

30. **Wooden toys**—The Wooden Toy Industry needs reorganization and introduction of small machines to reduce the cost. Attractive and changing designs, use of cheap and bright paints, is also a necessity (para. 55, page 24).

31. **Kattha**—The process of Kattha making can be improved with advantage (para. 56, page 25).

32. **Fountain pen**—The industry of Fountain Pen making deserves support and encouragement by Government (para. 59, page 26).

33. **Chapter III—Problems of supply of adequate raw material of good quality at reasonable prices**—In the matter of getting raw material of good quality at reasonable prices, there are several handicaps from which the cottage worker suffers. Without drastic action, it may be difficult to stop the prevailing malpractices and to save the cottage worker from a host of middlemen who have no permanent interest in the industry except their own profit. The question has to be carefully considered (para. 2, pages 27–29).

34. **Supply of finance**—Finance is the most essential requirement of a cottage worker and there must be arrangements to provide it to him on reasonable terms at proper time (para. 3, page 29).

35. **Technical improvements**—In respect to technical improvements, there is a necessity to have an organized agency engaged on research work to meet the specific needs of cottage worker and to filter down the information regarding new uses of raw material and new processes to him (para. 4, pages 29–30).

36. **Designs and standardization**—The question of designs is all important for the cottage worker and proper arrangement to supply these is necessary. Similarly standardization is equally important and is to be maintained (para. 5, pages 30–31).

37. **Finishing**—There is complaint against cottage worker that he produces articles which are wanting in uniformity, lacking in standard quality and good finish. This is a serious problem and requires systematic solution (para. 6, pages 31–32).

38. **Marketing**—All problems of cottage industries hinge round the marketing problem, solution of which can lead to the effective solution of others (para. 7, pages 32–33).

39. **Taxation**—While levying taxes on the products of cottage industries, local bodies should realize that they are hitting themselves by doing so. The policy of taxation should not be left to the discretion of these bodies. The cottage worker should also be given advantage of bulk rates and telescopic rates as is given to other big industries (para. 8, pages 33–34).

40. **Chapter IV—Terms of reference no. 1**—The cottage worker has gained much from the war, but in this period of post-war, he should be considered as much a problem as demobilized soldier (para. 1, page 36).

41. **Terms of reference no. 2**—The development of cottage industries should not be made dependent to their being supplementary or complementary to large scale industries. They must be developed even if this development is antagonistic to big industries, as by doing so we would be assisting large number of industrial workers in urban as well as in rural areas (para. 7, pages 36–37).

42. **Terms of reference no. 3**—There is no doubt that salvation of cottage industries lies in the co-operative organization. There cannot be

any limit of extent of application of co-operative methods, but they have got to vary for each industry and for each locality. For example in the case of artistic industries co-operative system should be introduced through marketing societies and superior craftsman should be associated with it. Government may have to run a few societies at selected places (para. 8, pages 37-38).

43. Though the principle of compulsory membership is very desirable yet it should not be introduced in the province till the intellectual level and social and economic order is not fundamentally altered (para. 9, page 38).

44. The co-operative societies to be successful must render the services, which the weavers and merchants get from the Sowcars at present. Instead of antagonizing professional merchants, there is considerable advantage in utilizing them in the marketing transactions. The ultimate aim should, however, be to replace them by self-supporting agency (para. 10, pages 38-39).

45. Terms of reference no. 4—There is need for using power by the cottage worker (para. 11, page 39).

46. The rate of electricity supplied to the cottage workers, should be such as will be competitive and within the capacity of the worker (para. 12, page 39).

47. There is necessity of a planned building programme for the rural areas, so that the workers' dwellings which are unfit for electrification at present, may become fit for electrification (para. 13, pages 39-40).

48. There should be uniformity of rates for Cottage Industries as far as possible (para. 14, page 40).

49. Terms and conditions of supply of power to the cottage worker should be on a more liberal basis such as are easily understandable by a common man. There is necessity of research and experimental work in the matter relating to best use of electricity, including the designs of electrical apparatus etc. Investigation should also be made by this organization of trade, industries and processes which can be complementary, so that farmers could adopt them as supplementary to their main occupation and use the plant to the fullest capacity. Similarly different stages in an industry and processes relating to it should be studied (paras. 16-19, page 40).

50. There should be a committee of experts to evolve a constructive scheme for development of electricity operated yarn (para. 20, page 41).

51. There should be a suitable machinery to educate the public in general and villagers in particular, on the safety measures for avoiding risks and accidents (para. 23, page 41).

52. Terms of reference no. 5—In the matter of application of Factories Act to small and cottage industries, it would be unwise to take any drastic and sudden action. The Act should be applied to selected industries employing ten or more persons and working with or without the aid of mechanical power (para. 28, pages 42-43).

53. Employment of Children Act should be applied to Brassware Industry of Moradabad. Investigation in other industries may be conducted to find out the working conditions (para. 29, page 43).

54. While it may be advisable and possible to apply the Act to some selected small scale industries, it may not be so in case of cottage and they have to be left out at present (para. 31, pages 43-44).

55. **Chapter V—Recommendations**—There is need to give industrial bias to our education and text-books including those of alphabets, should be written with that object in view (para. 2, page 45).

56. There should be museums of samples, improved articles and models of improved processes. There should be libraries attached to the museums and arrangement of giving talks to the workers (para. 3-4, page 45).

57. The basic method of technical training should be by means of tutorial classes, the main aim of which would be to solve difficulties of cottage workers. These classes should be linked up with any organization that may exist to develop a particular industry in a locality. The regular training institutions of the Industries Department should have facilities for training of part-timers (para. 5, pages 45-46).

58. There should be arrangement as a part of a distinct scheme for the recreation of workers and development of their physical culture (para. 6, page 46).

59. There should be complete arrangements for experiment in research and introduction of designs in Central Technical Institutions of the Industries Department. The institutions should have adequate staff and complete equipment. Research should be carried on for solutions of difficulties of workers, trial of appliances and processes. The Central Institutions should have facilities for evolution and introduction of new designs. The School of Arts and Crafts should be utilised for this purpose and it should act as seminary of designs. There should be provincial competitions in designs held periodically. There should be some expert designers on important industries attached to the Arts and Crafts School. The original designs evolved at Government Arts and Crafts School should be translated into actual working at the research and experiment sections of Central Technical Institutions (paras. 7-8, pages 46-47).

60. Technicians, salesmen and commercial travellers should be sent to different centres of industries in India and abroad for getting training in special branches of industry and even for solution of particular technical problem (para. 9, pages 47-48).

61. Co-operation is the best means of organizing production of cottage workers and there should be a programme of formation of societies for purchase of raw materials, finance, marketing, etc. (para. 10, pages 48-49).

62. These societies will be formed into a union for an area or for an industry, which itself would be linked up with a federation of unions. There should be a central federation at the top of all these and there should be a provincial Industrial Co-operative Bank and funds should be provided to it at low rate of interest by Government and Reserve Bank of India. In the beginning it may be advisable to work with the help of a group of workers without forming them into co-operative societies (para. 10, pages 48-49).

63. For the working of the Co-operative organization and its development, there should be a separate statutory body for the development of Cottage and Small Industries. It should have defined powers and sufficient funds to discharge its functions (para. 11, page 49).

64. This statutory body will consist of five members and Secretary will be the Director of Cottage and Small Scale Industries (para. 12, pages 49-50).

65. The body will perform the functions both of the Industries as well as the Co-operative Department (para. 13, page 50).

66. The funds to meet the expenditure on the management of commercial undertakings, till such time that work is on a sufficiently big scale to yield profit to cover cost of management, will have to be provided by Government. To begin with, a crore of rupees besides suitable grants, may be needed.

67. The foremost link in the organization is the Director, who should be an enthusiastic and enterprising worker, with a spirit of service and wide commercial knowledge and experience. The Director will have under him different departments each under a suitable officer (paras. 16-17, page 51).

68. There may be an Advisory Board to help the statutory body in the discharge of its functions (para. 18, page 51).

RAJNATH KUNZRU	..	..	Chairman
MADAN MOHAN SINGH, RAI BAHADUR	..		
AIJAZ RASOOL	..	..
B. K. GHOSHAI, RAI BAHADUR	..	..
H. C. SARDHANA, FOR HYDRO-ELECTRIC ENGINEER,			
U. P.	..	..
M. C. PANT, LABOUR OFFICER, U. P. KANPUR	..		
MAHESH PRASAD	..	..	Secretary.

Rai Bahadur Madan Mohan Sinha adds the following note :

Regarding the recommendations in Chapter V on industrial bias (para. 2) I feel the measures suggested do not do full justice to the needs. We have to utilize the educational institutions in the country fully to create an industrial bias in the mind of our younger generation. From the very start of a child's education a student must receive some instruction of an industrial bias in such a manner that it should be of a profitable nature from the secondary stage onwards, and this measure should also be kept in view so far as the girls' schools are concerned.

The next step should be to create an industrial bias in the minds of the general public. For this demonstration factories should be started in suitable centres. In the neighbourhood of these factories propaganda by means of Cinema films will be needed. The commercial operations of these factories should be in the charge of a non-official committee and all the employees of the factories should have a right to claim a fixed percentage of the profit in addition to their wages.

M. SINHA.

NOTE—Shri M. C. Pant first agreed with the majority and intended to sign the majority report, but on reflection, decided to agree with the minority report.

APPENDIX I

Cottage Industries in the United Provinces

This list contains those industries in which work is done in the homes of the artisans without the use of mechanical power:

1. Weaving of cotton wool and silk.
2. Shellac making.
3. Carpet weaving.
4. Durrie weaving.
5. Embroidery, silk cotton and gold wire.
6. Gold thread making.
7. Metal utensils.
8. Oil pressing.
9. Saltpetre refining.
10. Art brass-ware.
11. Whip making.
12. Cotton and silk printing.
13. Glue making.
14. Woodwork and wood carving.
15. Scissors making.
16. Leather working.
17. Tat patti weaving.
18. Marble work and stone dressing.
19. Silk rearing.
20. Glass bangles.
21. Cricket balls.
22. Saddlery.
23. Dyeing.
24. Lock making.
25. Steel trunks, and iron safe making.
26. Cutlery.
27. Pottery.
28. Hoisery.
29. Tobacco—chewing and smoking.
30. Wire drawing.
31. Making of gold wire for embroidery.
32. Wooden and horn comb making.
33. Toy making.
34. Biri making.
35. Tent making.
36. Brass inlay on woodwork tarkashi.
37. Namda or felt making.
38. Perfumery.
39. Ebony work.
40. Gota making.
41. Ghee making.
42. Jewellery.
43. Gold and silver ornaments.
44. Lac bangles.
45. Vinegar making.
46. Kite-flying yarn making.
47. Lead leaf making.



48. Gold and silver leaf.
49. Pickle and jams.
50. Surma or antimony.
51. Tabla and other Indian musical instruments.
52. Brush making.
53. Ivory.
54. Basket making.
55. Rope making.
56. Clay figures.
57. Papier mâché.
58. Glass bead curtains.
59. Rath and bullock-cart making.
60. Confectionery.
61. Tin-smithy.
62. Taxidermy.
63. Kutch making.
64. Bidar work.
65. Artificial flowers.
66. Munj mat and twine making.
67. Moss stone work (Banda).
68. Fire-work.
69. Cane and bamboo work.
70. Cast brass fitting.
71. Book binding.
72. Cardboard and box making.
73. Picture framing.
74. Lampshade making.

Minor industries in the United Provinces

This list contains those industries which are carried on in small factories in which mechanical power may or may not be used but in which workers are employed on wages to work on machines and appliances under the guidance and control of an employer or his agent. The list thus includes all medium and small power driven factories as well as non-power factories for handloom weaving, carpet, glass, etc. :

1. Iron and Engineering works (including electric works).
2. Tanning.
3. Soap.
4. Ink.
5. Cigarette and Biri.
6. Pencil.
7. Cardboard box making.
8. Tobacco-chewing and smoking.
9. Woodworking and carving and saw-mills.
10. Printing Press.
11. Lock making.
12. Iron foundry (small workshop).
13. Glass bangle.
14. Brass casting.
15. Shoe making.
16. Perfumery (Itars).
17. Biological specimens and slides.
18. Sunn hemp baling.
19. Lace making.
20. Electric fans.

21. Fire-works.
22. Shellac making.
23. Pharmaceutical works.
24. Lime.
25. Kutch making.
26. Tile bricks.
27. Disinfectants.
28. Confectionery.
29. Embroidery.
30. Cricket balls.
31. Open pan sugar.
32. Handloom weaving factories.
33. Carpet and durree weaving.
34. Saltpetre.
35. Chemicals including acids.
36. Scientific instruments.
37. Fountain pens.
38. Scents, hair oils and cosmetics.
39. Electro-plating.
40. Wire drawing.
41. Enamelling.
42. Steel trunk making.
43. Hosiery.
44. Button making.
45. Cutlery.
46. Scissors making.
47. Marble work.
48. Boot lace.
49. Lead leaf making.
50. Saddlery.
51. Pottery.
52. Dyeing.
53. Mathematical and Geometrical instruments.
54. Tent making.
55. Taxidermy.
56. Jam making.
57. Biscuit making.
58. Rice hulling.
59. Vinegar making.
60. Dal splitting.
61. Metal pressing.
62. Gold thread making.
63. Woll spinning.
64. Gold and silver ornaments.
65. Gota weaving.
66. Tin can making.
67. Metal utensils making.
68. Art brassware.



APPENDIX II

Estimate of quantity and value of production of War material by Co-operative and Industries Department of United Provinces

(1) Co-operative—

	Rs.
(i) Hemp goods	54,77,156
(consisting of tat patties, camoullage nets, tent components, butchery, screen, salitah and cloth feeding).	
(ii) Textile goods	25,41,528
(consisting of various sizes of newar, vests, dusters, napkins, towels, gauze cloth, cleaning cloth, china sheeting, mazri-cloth, bandage cloth, cotton nets, socks, patties and cotton web.	
(iii) Miscellaneous goods	1,77,660
(iv) Mazri uniforms	3,00,000
<i>Old cottage industries encouraged</i>	<i>Raw material used</i>
(a) Manufacture of tat patties	Sunn-hemp sutli.
(b) Niwar	Cotton yarn.
(c) Cotton patties	Ditto.
(d) Textile goods, such as vests, dusters, napkins, towels, gauze cloth, mazri-cloth, sheeting cloth, etc.	Cotton yarn.
(e) Pith hats	(1) Sarkanda reed at Roorkee.
	(2) Pith at Allahabad.
Labour employed in each industry	Skilled Unskilled
(a) Textile industry	10,000 5,000
(b) Newar	1,000 1,000
(c) Hemp products	5,000 45,000
(d) Pith hats	1,000 2,000

Statement showing various articles and their values (approximate) as a result of War efforts supplied by the Industries Department

Serial number	Name of article	Year of supply	Quantity supplied	Value in rupees
1	2	3	4	5
<i>I—Metal articles</i>				
1	Locks	1941-42 .. 1942-43 .. 1943-44 .. 1944-45 ..	6,40,000 8,50,000 11,00,000 14,00,000	10,00,000 12,00,000 17,00,000 21,00,000
2	Scissors	1943-44 .. 1944-45 ..	17,000 1,000	31,000 2,000
3	Safety pins	1943-44 .. 1944-45 ..	3,000 gross 8,000 ..	7,000 21,000
4	Safety razors	1943-44 .. 1944-45 ..	13,000 200	13,000 200
5	Knives	1943-44 .. 1944-45 ..	2,000 9,000	3,000 10,000
6	Spoons and forks	1941-44 .. 1944-45 ..	3,60,000 600	1,80,000 600
7	Knitting needles	1943-44 ..	400	300
8	Hob nails, pengate	1944-45 ..	500 lb.	2,000
9	Whistles	1944-45 ..	4,000	1,500
10	Latex tanks	1944-45 ..	6	2,000
11	Steel punches	1944-45 ..	100 sets	2,000
12	Curtain rings	1944-45 ..	200	10
13	Badges	1944-45 ..	5,500	10,000
14	Door handles	1944-45 ..	100	60
15	Plates stencils	1944-45 ..	100	30
16	Split pins	1944-45 ..	1,36,000	2,000
17	Bolts and nuts	1944-45 ..	3 tons	4,000
18	Iron handles, picking stitches.	1944-45 ..	2,000	4,000
19	Apparatus, telephones, portable carrier hand.	1942-43 ..	600	1,000
20	Hasp lid	1942-44] ..	40	80
21	Apparatus, weapon, training spot light bracket "C"	1942-43 ..	1,000	3,000
			Total }	62,99,780

Serial number	Name of article	Year of supply	Quantity supplied	Value in rupees
1	2	3	4	5
<i>II—Textile</i>				
1	Blankets	1940-41 ..	1,00,000	7,00,000
		1941-42 ..	6,00,000	37,00,000
		1942-43 ..	8,00,000	54,00,000
		1943-44 ..	2,00,000	22,00,000
		1944-45 ..	2,00,000	30,00,000
2	Silk Scarves	1942-43 ..	..	5,000
3	Camouflage nets ..	1941-43 ..	46,000	30,00,000
4	Parachute tape ..	1942-43 ..	300 lb.	12,000
			Total ..	1,53,17,000
<i>III—Pottery</i>				
1	Pottery	1942-43 ..	2,000	3,000
		1943-44 ..	2,000	3,000
		1944-45 ..	3,000	5,000
2	Urinals	1943-44 ..	4,000	6,000
		1944-45 ..	4,000	5,000
			Total ..	22,000
<i>IV—Wooden articles</i>				
1	Wooden spoons ..	1944-45 ..	800	700
2	Whistle Patrol Bamboo ..	1943-44 ..	7,000	700
3	Brass tramping wood ..	1943-44 ..	300	200
4	Wooden whistle ..	1944-45 ..	1,00,000	37,000
5	Helves and pick axes ..	1942-44 ..	4,00,000	3,00,000
6	Small handles and halves ..	1943-44 ..	47,000	7,000
7	Bullock carts ..	1943-44 ..	100	22,000
8	Folding Charpai ..	1942-44 ..	11,000	1,00,000
9	Stretchers	1942-44 ..	11,000	2,10,000
10	Combs	1942-44 ..	6,00,000	1,00,000
			Total ..	1,77,600
<i>V—Glass articles</i>				
1	Sheet glass	1942-43 ..	9,00,000 sq. ft.	2,00,000
		1942-44 ..	12,00,000 "	3,00,000
		1944-45 ..	12,00,000 "	7,00,000

Serial number	Name of article	Year of supply	Quantity supplied	Value in rupees
1	2	3	4	5
2	Bottles	1942-43 .. 1943-44 .. 1944-45 ..	36,00,000 32,00,000 77,00,000	4,00,000 9,00,000 21,00,000
3	Gloves and Chimneys ..	1942-43 .. 1943-44 .. 1944-45 ..	5,00,000 4,00,000 5,00,000	50,000 1,00,000 2,00,000
4	Tumblers and jugs ..	1942-43 .. 1943-44 .. 1944-45 ..	3,00,000 30,000 3,00,000	1,00,000 20,000 1,00,000
5	Glass shells for electric bulbs	1943-44 .. 1944-45 ..	14,00,000 25,00,000	2,00,000 2,00,000
6	Miscellaneous ..	1942-43 .. 1943-44 .. 1944-45 ..	3,00,000 1,00,000 50,000	2,00,000 2,00,000 50,000
			Total ..	57,40,000
	<i>VI—Leather articles</i>			
1	Chaplies	1942-44 ..	30,000 pairs	1,00,000
2	Lifts	1942-44 ..	35,000	5,000
3	A. R. P. Boots ..	1942-43 ..	300 pairs	2,000
			Total ..	1,07,000
	<i>VII—Oil</i>			
1	Linseed Oil (raw) ..	1942-43 .. 1943-44 .. 1944-45 ..	5 maunds 500 „ 10 „	100 12,000 300
2	Shafting Oil	1943-44 .. 1944-45 ..	23 „ 200 gallons	1,000 1,000
3	D. B. Linseed Oil ..	1943-44 .. 1944-45 ..	1,400 „ 1,000 „	6,000 5,000
			Total ..	25,400
	<i>VIII—Soap</i>			
1	First quality washing bar soap.	1942-43 .. 1943-44 .. 1944-45 ..	1 maund 700 maunds 600 „	40 28,000 20,000
			Total ..	57,040

Statement showing war technicians trained under the Industries Department, up to 31st March, 1946

	1942	1943	1944	1945
Blacksmiths	21	37	29	14
Carpenters	76	446	323	197
Craftsmen (mechanic)	4	7	2	..
Electricians	39	100	53	38
Engine steam .. ..	..	12	9	10
Driver, I. C.	13	34	31	41
Fitters	395	465	387	320
Mechanics	43	50	30	11
Moulders	26	23	13	10
Painters .. ..	..	8	10	12
Tin and copper smiths .. ..	..	41	8	..
Basic training .. ..	..	..	9	..
Turners	108	116	73	42
Boot makers .. ..	..	..	42	..
Total	725	1,339	1,024	695

APPENDIX III

Electric power required for Agricultural and Farm Machinery

1. Flour mills. .. 3 to 10 H. P. depending on the size of stones.
2. Chaff cutter .. 2 H. P.
3. Sugarcane crusher .. 10. H. P. upward.
4. 18" sizes centrifugals .. 3 H. P.
5. 36" ditto. .. 7.5 H. P.
6. Milk separators .. 1 H. P. upward depending on the separator size.
7. Oil Ghannies Bengal type 5 to 6 H. P. per pan.
8. Threshing machines .. 20 to 25 H. P.
9. Electric tractor plough .. 30 H. P.
10. Electric Hoist, portable, 1-2 H. P. suitable for farm work (up to 3 cwts.).
11. Milking machines .. 1 H. P. capable of milking 20 cows in 1 to 1½ hour.
12. Incubator (egg machine) 16 units (kw. hour) for an output of 250 eggs.
13. Pasteurising of milk .. 100 kw. for an output of 528 gallons per hour.

Domestic Machines

1. Clothes washing .. ¼ to ½ H. P.
2. Vacuum cleaners .. ¼ to ½ H. P.
3. "Elec. Many Ann" for ⅛ to ½ H. P. operating various accessories such as boot polishing, buffing, knife cleaning, potato peeling, mincing and corer mill.

4. Sewing machines .. 1/16 to ¼ H. P.
5. Plate washers .. ¼ to 1 H. P.

Workshop Machines

1. Lathes screw cutting up to 6" centres. ½ to 1 H. P.
2. Lathes screw cutting up to 12" to 30" centres. 2 to 5 H. P.
3. Turret .. 2 to 4 H. P.
4. Drills, portable .. ½ to 2 H. P.
5. Small sensitive drills .. ¼ to ½ H. P.
6. Radial 4 ft. to 6 ft. 2 to 4 H. P.
7. Boring Mills 3 ft. to 9 ft. 5 to 10 H. P.

8. Milling machines—

Small ..	.. $\frac{1}{2}$ to 1 H. P.
Medium, universal ..	.. 2 to 4 H. P.
9. Slotters 12" to 24" .. 5 to 10 H. P.
10. Shapers 18" to 30" stroke 2 to 4 H. P.
11. Planers 6×2×2 ft. .. 3 to 5 H. P.
12. Punches, medium .. 2 to 6 H. P.
13. Shears .. 7 to 15 H. P.
14. Cold saws 12" to 24" .. 2 to 5 H. P.
15. Rivetting machines .. 3 H. P.
16. Grind stones .. $1\frac{1}{2}$ to 3 H. P.
17. High speed abrasive wheels $\frac{1}{2}$ to 1 H. P.
up to 12" dia.

Electrical power required for Industrial Machinery

TEXTILE

Particulars

1. 1,400 spindle-ring spinning 7 H. P.
frame.
2. Indian Calico looms 3 to 9 $\frac{1}{2}$ to 2 $\frac{1}{2}$ H. P.
ft. reed.
3. Loom reeds space 28"—44" $\frac{1}{2}$ H. P.
4. Loom reeds space 54" $\frac{3}{4}$ H. P.
5. Loom reeds space 78" 1 H. P.
6. Indian cotton mill looms .. $\frac{1}{4}$ to $\frac{1}{2}$ H. P.
7. Baling press .. 10 H. P.
8. Cloth stampers, spray dampers 5 H. P.
9. Beam warpers per row of 6 6 H. P.
10. Sizing machines .. 5 H. P.

Leather preparing and Book Making Industry

1. Tan presses .. 2 to 3 H. P.
2. Boot makers presses and $\frac{1}{2}$ to 1 H. P.
rollers.
3. Stampers, skimmers, splitters, $\frac{1}{4}$ to $\frac{1}{2}$ H. P.
rounders, and perforators, cycletters
and timers, etc.
4. Clicking pressers and sole $\frac{1}{2}$ to 1 H. P.
levelers, etc.

Wood working

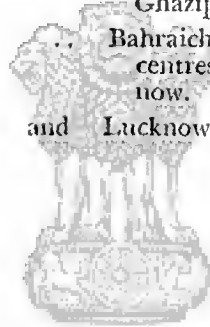
1. Saws circular 24" dia. .. 5 to 10 H. P.
2. Band Saw (light) .. 2 to 5 H. P.
3. Planners small .. 1 to 3 H. P.
4. Planners high power .. 10 to 15 H. P.
5. Pattern maker slathe .. 2 to 3 H. P.
6. Sand paper machines .. 2 to 4 H. P.

APPENDIX IV

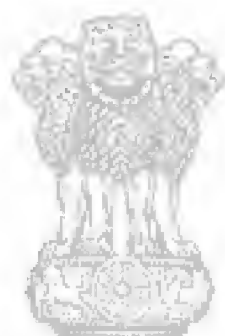
List of important small scale and cottage industries of United Provinces with the important centres (vide Chapter IV)

Industries	Centres
1. Shellac	Mirzapur.
2. Carpet (Qalin and durce)	Agra, Mirzapur, Shahjahanpur, Meerut.
3. (a) Brasswares ..	Moradabad, Banaras, Hathras,
(b) Lock making ..	Aligarh.
4. Cutting Scissors and Razors.	Meerut, Aligarh, Nagina, Najibabad, Bulandshahr (Amarpur).
5. Hardwares (iron) ..	Hathras, Najibabad, Mirzapur.
6. Pottery and toy making ..	Chunar, Khurja, Nizamabad, Agra, Lucknow, Bulandshahr (Meerut).
7. Wood carving and carpentry.	Nagina, Saharanpur, Amroha (Cholak and Katura).
8. Oil crushing (ghanni) ..	Gorakhpur, Shahjahanpur, Meerut, Mathura, Kalpi.
9. Embroidery and Gota making.	Agra and Banaras.
10. Glass industry ..	Bijnor (village) (Sarni Shalitura), Bulandshahr, Firozabad.
11. (a) Tape making ..	} Meerut and Kanpur.
(b) Newar ..	
(c) Net ..	
12. Basket and Cane furniture	Bareilly, Allahabad, Jhansi.
13. (a) Handloom silk and cotton.	Tanda, Gorakhpur, Meerut (near Ghaziabad), Pilkhwa.
(b) Printing ..	Farrukhabad and Jahangirabad.
14. Soap making ..	Meerut, Bareilly, Agra, Badshahpur, Jaunpur (village), Lar Road.
15. Tanneries (village) ..	Saharanpur, Meerut, Kanpur.
16. Blanket weaving and Woollen goods.	Muzaffarnagar (village), Meerut, Lower village Mirzapur, Badhoi, Almora.
17. Printing Industry ..	Allahabad and Kanpur.
18. Khandsari sugar ..	Bareilly and Pilibhit.
19. Gur making ..	Meerut and Saharanpur.
20. Biri making ..	Jaunpur, Allahabad, Moradabad, Jhansi, Meerut.
21. Paper making ..	Kalpi and Mathura.
22. Hosiery ..	Meerut, Agra, Farrukhabad.

- | | | | |
|-----|-------------------------------|----|--|
| 23. | (a) Motor body building | .. | } Meerut. |
| | (b) Tonga making | .. | |
| | (c) Cart making | .. | |
| 24. | Furniture | .. | Bareilly. |
| 25. | Fountain pen making | .. | Meerut and Kanpur. |
| 26. | (a) Ayurvedic medicine | .. | { Meerut. |
| | (b) Unani medicine | .. | |
| | (c) Hill jams | .. | |
| 27. | Stick making | .. | Mussoorie, Babakalikamliwala Rishikesh, Dehra Dun, Gurukul, Kangri. |
| 28. | Lime burning | .. | Dehra Dun. |
| 29. | Stone carving | .. | Agra and Mirzapur. |
| 30. | Trunk making | .. | Allahabad. |
| 31. | Essential oils— | | |
| | (a) Itars | .. | Shikandarpur, Ballia, Jaunpur, Ghazipur. |
| | (b) Scented oil | .. | Bahraich, Kannauj, Aligarh (two centres), Banaras, Allahabad, Lucknow. |
| 32. | Tobacco, Chewing and smoking. | | Lucknow. |



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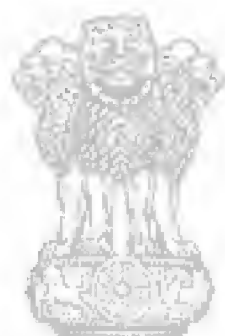


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MINORITY REPORT

१९५५-५६



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MINORITY REPORT

It is with very deep regret that I reluctantly beg to submit my Minority Report. My colleagues have been very kind and considerate to me throughout, and am very thankful and grateful to them all.

I was unanimously asked to draft the final report, which I willingly did at a great inconvenience and trouble. But unfortunately when it was taken into consideration I had to be away, outside the country, and could not convince the members that my approach of the subject should be endorsed by them. I have taken this unpleasant job of writing the Minority Report for the following reasons and I hope my colleagues will be pleased to appreciate it:

- (a) Presentation of the final report lacks spirit and enthusiasm.
- (b) Most of the items, some of which are given below, are entirely left out which I consider to be of utmost importance for the success of cottage industries:
 - (i) Protection to Khadi.
 - (ii) Protection of weavers from organized mills and saving them from their dependence on their rivals for the raw material produced by the latter.
 - (iii) Legislative measures recommended for restricting the spinning mills to weave yarn of a certain percentage and not above it, and controlling the expansion of spinning mills with the help of the Government of India.
 - (iv) Nationalization of cottage industries.
 - (v) Checking exploitation in Dyeing and Printing Industry.
 - (vi) Encouragement to Red Pottery Industry.
 - (vii) To compel workers to form Co-operative Societies.
 - (viii) Mutilation of the scheme for Departmental organization to help cottage industries.
 - (ix) To enact suitable measures to protect the cottage industries from the exploitation of merchants and capitalists.
 - (x) Relegating the most important points from recommendations to suggestions only and thus nullifying the effect of the report and the points raised in it.
 - (xi) Very meagre suggestion to employ finance for developing cottage industries.
 - (xii) Omitting certain important paragraphs from the draft which were essential to bring the needed relief to the cottage worker.
 - (xiii) Chapter on organization has been badly mutilated.

I, however, agree with the "Preliminaries" of the Report and have not repeated the same in my report.

I would have added something more useful specially in co-operation and use of electricity if submission of the report would have been delayed by the time I receive my literature from the United States of America. Now I have mostly drawn upon memory and have purposely left out some important points which need verification.

“To banish poverty let no man remain unemployed”

CHAPTER I

Place of Cottage and Small-scale Industry in the Economy of the Province

Economic Condition—(i) The economic condition of the common man in the United Provinces is not satisfactory. The standard of living is low and people are generally poor, large portion of these especially in the East live for the most part of the year on parched grain and pass their days in one loin cloth. Population is large and there always exists unemployment or under-employment. Seventy-two per cent. of the population lives on agriculture with very slender sources of income. Agriculture is the least paying industry in the world—a province mainly dependent upon it must remain poor. According to the Report of the Royal Agricultural Commission the total number of people employed in agriculture have no employment on an average from three to six months in a year. Putting the same thing in another form at least one-fourth of the population living on agriculture remains unemployed.

(ii) All wealth proceeds from labour. If we provide suitable productive employment for our people the poverty of the masses must disappear. One of the fundamental duties of the modern State, in all the countries of the world, is to find employment and to provide people with amenities and necessities of life. In all civilised countries, therefore, all able bodied people who are out of employment get doles from public funds. It is the business of the State to see that the largest population of their country remains employed. Figures of unemployed people are always published monthly for public information. In our country, much less in the province, no attempt has ever been made to find the number of unemployed people, what to say of providing relief to them.

(iii) If the total number of able-bodied people out of sixty million be considered to be only twenty millions and out of it one-fourth be considered as unemployed, we must find suitable employment for at least five million people in the province. It is not at all possible for the Government to provide such a huge population with doles. System of giving doles might be practical for countries where the number of unemployed is small, and which are financially strong to do so. But for a small province like ours it is simply impossible. Even if we allow Rs.90 a year for the unemployed (paying only annas 4 a day) we require 450 million rupees a year for the purpose. Our total revenues are much less than the above amount.

(iv) System of dole is neither conducive to those who give it nor to those who receive it. Its moral effect on the persons receiving is certainly very degrading and depressing. The question of unemployment, therefore, will have to be solved by some other ways than by the provision of doles by the State.

2. Improvement of Agriculture—In certain quarters it is suggested that we can solve the problem of unemployment if we make improvement in agriculture. Those who put forward this argument obviously forget that agricultural industry is already supporting about seventy-two per cent. of the population and pressure on land is already too heavy. Land per capita is already so low that even in countries where up-to-date scientific methods are employed, several times of that area has been found to

be essential per head. Though improvement in agriculture, or introduction of machinery or even co-operative or collective farming must lead to higher production, yet it would not open new ways of employment for the extra population. On the other hand, it must throw a good percentage of population out of employment. It should not be understood that we deprecate improvement in agriculture, but I am definitely of opinion that improvement in agriculture is hardly a solution.

3. **Large-scale Industries**—By another section of the people, development of large-scale industries is suggested to be the solution. Bombay Planners are naturally in favour of big industries, and have laid down that after fifteen years of planning, it will be possible to reduce the percentage subsisting on agriculture from seventy per cent. to fifty-eight per cent and the population living on industry would increase from fifteen to twenty-five per cent. But when we reduce these percentages to actual number, we would find that the number of persons living on agriculture has gone down. According to the calculation of the planners themselves, there were ten crores of people living on land in 1931 which will in 1962 increase to twelve crores. It is also apparent that increase in the culturable area would not be very large. Bombay Planners have also envisaged a minimum wage for labour and if that is assured, the cost of cultivation would naturally rise and would leave smaller margin of profit for the producer. We can, therefore, very safely say that so far as the problem of unemployment is concerned, the development of large-scale industries is not the solution. It may put a little more in the pockets of the industrialists and may support a bit more of population and may raise the standard of living of those who are engaged in those industries, but it is hardly a way which may give relief to the vast number of unemployed people in the country.

4. **Cottage Industries the Only Solution of our Economic Bills**—I am definitely of opinion that the only way to fight the monster of unemployment is through the development of cottage and small-scale industries. Though the Bombay Planners have recognized the importances of cottage and small industries, yet they do not seem to have given their blessings to this very important part of development in the economy of the country. They have disregarded the principle that the production for the masses should be by the masses themselves.

(ii) I am of opinion that in a province whose density of population is large, only the development of cottage industries can provide employment to the masses and by it their standard of living can be raised. Countries like England, America, Germany which started mass production had a small production and wider market to export their product for a number of years. The position has materially changed, and it is not easy for them to find foreign dumping grounds. We certainly have our own big market but it is not big enough to keep our factories going. In a poor country like ours, it is not easy to sell much. Moreover, we suffer from other handicaps also, for example, bad means of transportation, illiteracy, lack of skill, labour and the like. Under these conditions the only method of employing the idle hands is the introduction of small and cottage industries. In this direction we would have to follow the example of Japan and China and will have to earmark big factories for the production of those articles which cannot be manufactured on a small scale. Cottage industries, therefore, should be our motto and big industries an exception. Even at present in our province twenty-five times more people are employed in cottage industries against big industries.

(iii) My opinion is endorsed by no less an authority than Mahatma Gandhi—a representative of the poor. He wants to make every village a self-sufficient one and will like to provide all their essential needs for themselves from their locality. “Back to the villages” is his call to the masses.

5. **Advantages**—(i) Even apart from the grounds of necessity, cottage industries have certain advantages over large-scale industries, and it would not be out of place to enumerate them, in brief, at this stage. Firstly, in matter of investment and organization a cottage worker has to invest only an insignificant amount of capital whether it is subscribed by many or by a single individual. In a poor province which is naturally shy in the investment of capital this in no way can be said to be a small point. Thus per capita capital will not be very large to begin our work. A cottage worker only requires a small place, a limited and cheap type of tools, limited amount of raw material and has to lock up a small capital in the stock of finished goods. In the matter of organization, the cottage worker does not have to provide for a large establishment and staff for supervision and administration. He himself is his own “Works Superintendent” and he himself plays the roll of “accountant”. The overhead charges, therefore, will always remain small in the case of a small worker.

(ii) In the matter of variety of production and variety of designs, the cottage worker has got a definite advantage over the big industries. He can apply his skill to each individual piece and can turn out any number of designs without any extra labour and cost, while in case of the machine for every change of design, parts will have to be changed and adjusted. Only standard designs can be executed economically. In so far as production of artistic articles is concerned it can never be done by large-scale industries. It is the cottage worker alone who can produce artistic articles and cater for different tastes.

(iii) The cottage worker in most of the industries has also an advantage over the large scale producer in the matter of the cost of marketing. He has not to incur heavy charges on exports nor has he to take risks of damage in transport, etc. Generally, his market is limited to his surroundings where he takes his articles to the consumer himself. He comes in direct contact with his purchasers and thus gets familiar with their tastes and consequently is in a position to produce what is actually needed and is in demand.

(iv) Indirectly the development of cottage industries automatically solves another problem which most of the Provincial Governments have to face now, namely, the problem of congestion arising out of the development of large-scale factories in some selected centres, for example, at Cawnpore in our province. The concentration of large-scale factories in selected centres has created many problems for the State and it has been realized that in the interest of the health of the people, it is better that the industries are disseminated over a wider area.

(v) The present war has shown that it is easy to destroy large-scale factories and to disturb the whole economy of the country by concentrated bombarding. This device has been followed by all countries during the war. It is, however, remarkable to note that China was able to fight against Japan for a number of years even when no help was received from outside. This was possible only because China depended on its cottage rather than on its large-scale in-

industries. She supplied the necessities both of her army and her people, through this means. If she had not relied on the fact of development of small-scale industries, which could be changed overnight from one place to another, it was difficult for her to fight a well equipped army of Japan, which possessed the most modern weapons of destruction. Due to their being scattered over a wider area, cottage and small-scale factories possess the advantage of being comparatively secure against the weapon of destruction.

(vi) There is yet another factor in favour of cottage industries which should not be lost sight of. Man is a living organism and is not guided by the love of money alone. In case of labourers engaged in the factories, they have to leave their homes and live in the filthy factory busties, work incessantly for eight hours and in an atmosphere where the relations of the employer and the employee are only impersonal. The area in which the labourers live is crowded unhealthy, slum dungeon. On the other hand a cottage worker is not a slave either of his machine or the factory siren. He is his own master. He is master of his own time and he works whenever he likes, lives in an open and healthy surrounding with his friends and relations. An independent man living at home is satisfied with less income—a factor which has kept so many workmen at their crafts. This makes all a world of difference between a cottage worker and a factory labourer and is one of the main reasons why the cottage worker has survived in spite of hard onslaughts on his occupation.

6. **Protection and Encouragement of Cottage Industries in National Interest**—(i) Without going into further merit of cottage industries I would like to put on record that given proper assistance and guidance, cottage industries can successfully hold their own in the market. They have survived and have in some cases flourished in spite of untold handicaps. It is the genius of workers that has given them a chance of improvement. Their methods are both efficient and effective, their vitality is immense and their scope is unlimited.

(ii) In this report, therefore, I have measured the recommendations with the yardstick of employment. In order to avoid the unnecessary burden on the consumer I have suggested ways and means to make the cottage industries more efficient and less costly.

(iii) I considered cottage industries to be complementary to big industries and *vice versa* but I maintain that in national interest as long as we do not provide our all necessary needs, big industries should not be allowed to make encroachment upon cottage and small-scale industries.

(iv) When big industries have been allowed protection to the extent of more than 200 per cent, cottage industries do require the same type of help and protection rather more in the name of humanity at large. I further maintain that the multiplication of cottage industries will produce a far healthier, more intellectual and art-loving nation, than if the people are made the slaves of big machines.

(v) I would like to record that I have been very much impressed by the ingenuity displayed, patience undergone and the disabilities suffered by the cottage worker during the war period. Whenever and wherever he was taken into confidence and was given proper guidance he never failed us. His experience is great, his resourcefulness is wonderful and tenacity of purpose is unlimited. I wish such a batch of useful people of the society may be properly treated, and patronized and I am sure they will help us in the production of cheap and serviceable articles as Japan

did through her well-planned and organized cottage industries before the war. The example of an Oriental country is before us and if we follow the lead, no country of mass production will be able to compete with us. It is only through cottage industries that we shall be able to distill down skill, ingenuity and scientific principles amongst the masses without which no nation can be made great. It is they who will not clamour for capital goods and will find out their own devices and simple tools for the manufacture of the most complicated articles. The ingenuous and simple methods employed in the bangle manufacture and complicated designs in jacked cloth must be an eye-opener to everybody. The textile industry of India which is now a hundred years old still remains at the mercy of the foreign machinery manufacturer and cries hoarse to get the machinery from abroad and so is the case with other big industries. If we have to avoid all this drain of wealth and to keep our workers in sound knowledge and experience, cottage industries must have their legitimate place in the national planning, must get their due share in the national assets and they must be re-organized and patronized properly.

CHAPTER II

Survey of Cottage and Small-Scale Industries

Term of Reference no. 1.—"A general all-round survey of cottage industries and small factory industries of this province and in particular, the influence of war on these industries and the steps necessary and possible to stabilize the gains, if any, of these industries arising from the war."

7. **Definition**—(i) Before anything can be done a general all-round survey is absolutely necessary. The problem of cottage industries has been investigated several times, particularly between the years 1930-11, in various provinces, yet a complete survey has never been made. Luckily, the Department of Industries has made a rapid survey of the Industries in the United Provinces and the Committee has mostly drawn upon this material. It has also made use of the published material available in other reports. The Committee has selected a few important industries of the province and has examined them in details. We, however, recommend that a complete survey of all the cottage and small-scale industries may be maintained and revised from time to time.

(ii) Before I give details of different industries it seems desirable that cottage and small-scale industries may be defined. It is unfortunate that in the past there has arisen some confusion without a clearcut definition. Cottage industries were first defined or described by the Industrial Commission.

The United Provinces Industrial Re-organization Committee also discussed the scope of cottage industries and so also the Report of the Survey of Cottage Industries of Madras. For both these types of Industries a definition was suggested by Bombay Committee presided over by a well-known Industrialist Sir Purshottandas Thakurdas. In this report for the first time a distinction between the cottage and the small-scale industries was drawn. Though these definitions created some confusion and difficulty in the way of improvement yet these were adopted by economists and other authors. The definition of cottage industries cannot ignore the economic background in which such industries generally work or are likely to work.

(iii) I define the cottage industries "as the industries where manufacture is carried on by the owner himself with the help of the members of his family, dependants, relations and with a few wage-earners but the total number of persons employed does not exceed nine. The work is done in the home of the cottage worker or in another locality. The employment of power or organization on the basis of limited or unlimited liability will not exclude the industry from the category of cottage industries." A small-scale industry is defined as "any industrial establishment or concern organized on limited or unlimited liability basis wherein artisans or wage-earners are employed by the capitalists or work for their own benefit, provided the number of worker does not exceed 50." To limit such establishment by prescribing the maximum capital invested does not seem to be desirable as has been done by the Bombay Committee.

(iv) The main difference between a cottage industry and a small-scale industry is that in the first case the work is entirely done by the artisan himself and for his own benefit, while in the case of a small-scale industry the work may be organized by the capitalist for his own ends. In the latter case, however, the exploitation of the workers is obvious. If on the other hand, the workers themselves combine either into a co-operative society or under some other partnership or on a corporate basis, it must remain a small-scale industry with the difference that the profit made is shared by all the workmen who join the concern and no exploitation is the result.

(v) I very much wish that a distinction in the two types of small-scale industries, noted above, be maintained so that when workers combine in a corporate body for improving their financial condition they may not be classed with the capitalistic concerns. They should get the same support both from the public and the Government as they would have received if they would have worked under cottage industries. I tried to make this distinction clear by appending the word "Workmen" and calling them 'Workers' small-scale industries' but it does not improve the matter much. However, without discussing further this point I would invite the attention of the Government and that of the people to make some sort of a distinction when the occasion arises. When my recommendations are accepted and the cottage workers are organized into their own associations then there will be a time for observing such a distinction.

(vi) I, however, point out that I have every sympathy with the actual workers and I wish that all the gains produced from their genius, skill and experience may be utilized for their benefit and that they should not lose the sympathy either of the public or of the Government simply because they have tried to organize themselves into different corporate bodies of some sort or the other. In any future enactment to avoid sweating and exploitation of the worker the distinction between the capitalistic and workmen societies must be made so that the workers may not be deterred from forming themselves into corporate bodies.

Survey—(vii) The following brief survey of some of the more important industries will convince everybody of the vitality that still exists in cottage industries. This will also give them an idea of the injustice and indifference workmen have suffered in the past. I shall try to indicate the lines of development of individual industries also in this brief description.

Textiles

8. Cotton—(i) The United Provinces is a very old cotton-growing place. From times immemorial both types of cotton, coarse as well as

fine, are produced and utilized. All the early experiments on fine cottons were started in this province. Aligarh is the centre for coarse cotton and Chandausi that of fine. Several strains in long staple like Prusso-American have been developed and are multiplied.

(ii) Hand-ginning was generally practised in homes but now ginning factories are established and hand-ginning is only partially practised. When villages are supplied with cheap electricity, ginning must be introduced on a small scale in most of the villages so that cotton seed may be available for milch cattle. Lint produced in these small power-driven gins will in no way be expensive inasmuch as whatever little will be the loss in efficiency it will be more than covered by the saving in transport charges. Some baling arrangement in that case may be necessary in groups of villages if the spinning factories do not function nearby. Even then hand-ginning of small quantity for the supply of pure seed will have to be resorted to by the cultivator himself.

9. **Carding**—The next step is to card cotton and turn it into slivers. This is the most important process and upon this depends the efficiency of spinning as well as the production of higher counts. It is unfortunate that this process has not achieved the importance that it deserves. As the carder is generally paid by the quantity carded he does not care much for the quality of the process. The All-India Spinners' Association has recognized the importance of carding, still there are not many spinners who do their own carding. There are enough carders in rural areas and they have a brisk trade in cold weather when cotton is generally employed in stuffing domestic covers and clothes to protect people from cold.

10. **Hand-spinning**—(i) Hand-spinning is done from times immemorial in this province. Long before the spinning Jenny was evolved thread was spun both on the takli and charkha. Much before the time Mahatma Gandhi started his Khadi cult and revived the art of hand-spinning Charkha was supplied in villages of the United Provinces, and yarn made from it was utilized for domestic needs. Large quantities of used cotton taken out of the covers every year was utilized for yarn of lower counts to be used in making newar, carpets and other coarse clothes.

(ii) Perhaps there is no such simple, least expensive and easily learnt industry than spinning. For the weak, the infirm and the female sex it is a good occupation and nothing can replace it. However, its economic yield is low and it may not be a paying proposition as a whole-time work unless and until it is subsidised by the public or the State. Mahatma Gandhi considers that everybody should spin for his needs and in this respect he must be self-sufficient. The idea has not been universally adopted but the wearing of Khadi (cloth made from hand-spun yarn) has raised the status of the weaver. Congress has made the wearing of Khadi essential for all its members.

(iii) I am extremely sorry that during the war when sufficient coal could not be raised and yarn and cloth imports were entirely stopped, the usefulness of the development of this industry was not realized. It was the time when a higher wage could be given to the hand-spinner and the Khadi production could be established on a sounder basis. It must, however, be admitted that Charkha cannot stand in cheap production against spinning mills. Mahatma Gandhi discovered this point long ago and advertised an attractive reward for its improvement. It is a pity that none of the improvements came to the standard. I still feel that a more attractive reward should be advertised and the competition may remain open to the entire world for a period of three years.

(iv) By an improvement in carding, blending of short and long staple cottons and by a proper control of temperature and humidity a higher production and of higher counts is possible. It is well known that high counts can be easily spun during rainy season while in not weather only low counts with lower yield can only be spun. Artificial and simple methods of control of temperature and humidity must be devised. I recommend that a common fund of five lakhs to be contributed by all the provinces be created to carry out research both in the improvement of Charkha and the circumstances under which cotton may be spun with advantage. In case other provinces do not join let our Government set apart a lakh of rupees for the purpose. The research should be entrusted to chemists and engineers of high attainments. During the war a great deal of research has been made in fibres and all that knowledge must be collected and utilized in this research.

(v) At present Rs.12-3-0 is the monthly wage of 25 days' working at eight hours a day given by the All-India Spinners' Association. This is rather low and it becomes lower still when a portion of the wage is deducted on account of the Khadi the producer of yarn has to pay for. Such a restriction should be withdrawn and a wage equal to the wage given to a woman labourer of the locality may be fixed. The difference in expenses should be borne by the Government by levying a tax on mill-made cloth consumed in the province.

11. **Khadi**—(i) The Gandhi Ashram of Meerut controls pure Khadi production in the province. The figure for the last year's (ending June, 1946) Khadi production under the same and sales during the same period are :

	Rs.
Total Production ..	12,75,000
Total Sales ..	14,75,000

There are other people too who produce pure or mixed Khadi. During these days of control of cloth large quantities of cloth made from hand-spun yarn were placed in the market. But all this must disappear as soon as mill yarn is sufficiently available. At that time Khadi will depend upon the sentiment of the people for its consumption. We, however, think that legislative help to push genuine Khadi to keep it pure and unadulterated must be given.

(ii) It is not only that the hand-spun yarn is expensive but its weaving charges are also high inasmuch as the breakage of less twisted yarn, which hand-spun generally is required more time. But this defect may to a great extent be overcome by proper sizing. For this too research is needed and I propose that this subject may also be entrusted to the research organization proposed above.

(ii) When hand-spun yarn is doubled or tripled the weaver likes it better than the mill-made yarn. That being so I recommend that the All-India Spinners' Association may try to concentrate upon the production of such cloth with numerous designs and I hope that in that case Khadi may be able to compete with mill-made cloth. Attractive designs in coating may be specially useful in this connection.

(iv) There is one main advantage in the use of cotton-stuffed cloth used in winter if made of Khadi. They are always warmer than mill-made cloth and the hand-spun yarn fixes strongly with carded cotton inside. Both these properties must be well advertised, and propaganda is made

for its more consumption on this score. I recommend that the All-India Spinners' Association be patronized by the Government so that the spinners may get a fair deal and improvements in Khadi may be possible. Further, I recommend that all cloth purchased by Government and local bodies for uniforms, hospitals and schools should be purchased from the Spinners' Association.

12. **Handloom and Mills—(i)** In spite of the fact that I have a little space and time at my disposal, I am forced to say a few words about the history of mill industry in India and its development at the cost of handloom industry.

(ii) India long before the Industrial Revolution used to supply cotton cloth to England and the East India Company was originally established to trade with India mostly in cotton textiles. In 1816-17 the exports of cotton goods from India stood at the figure of 165 lakhs of rupees but began to decline after that period mostly due to the discriminatory action taken in England and the development of spinning Jenny side by side. By 1830-31 the exports declined to 8 lakhs of rupees and in that very year cotton yarn piecegoods began to be imported to the tune of 60 lakhs of rupees. It will be needless to go into the details of this disheartening history and the reprehensible methods employed to kill our industry by England but it will be interesting to note that in spite of all the legislation in England the English women stuck firmly to the coloured cloth and artistic fabrics of Indian origin and that these types of fabrics could not easily be manufactured economically by the mills.

(iii) The first Indian mill was established in 1851 and by 1900 there were 193 mills with nearly 5 million spindles but the number of looms were only 40,124. Evidently, Indian mills at first contributed on the supply of yarn and this was a help to the handloom. During the period 1896-97 to 1900-10 while the Indian mills used 240 million lb. of yarn as much as 1,003 million lb. (i.e., nearly 2½ times) went to the handlooms. This was certainly a proper approach by the Indian mills in India. The weakest point with the Indian Textiles Industry was production of yarn and when the Indian mills supplied this deficiency, both mill and the handloom could survive with advantage.

(iv) The handloom industry was helped by the Swadeshi Movement started in 1890 by the Indian National Congress and adopted later after the partition of Bengal. In 1914 war came in and the supply of yarn from outside declined. The imports of cloth effected and the Indian mills started utilizing their own yarn for the manufacture of cloth in their own mills, with the result that from 1914-20 the production of cloth from Indian mills went up considerably while little advantage accrued to the handloom industry. The difficulty of securing dyes, cut at the very root of the handloom industry which depended upon the production of coloured goods. Owing to the external competition in high and medium counts the mills turned their eyes to the prospective field of women's cloth about the year 1925. Through during the war the mills did a great injustice in not supplying yarn to the handloom industry and to concentrate upon the production of cloth rather than of yarn yet in 1925 they became more greedy and tried to usurp the preserve of handloom industry. This was the beginning when the greedy industrialist realized his main advantage and tried to make as much profit as possible to crush this unwanted competitor. Of course, the Government stood aside and perhaps looked calmly on this unequal competition. The Government ought to have realized that the handloom industry depends for its raw material upon its rival

and therefore protection was needed and the principle of live and let live should have been enforced. In 1922 and 1927 and then again in 1931-34 import duties on yarn were levied and according to the Fact Finding Committee on Handloom and Mills, the handloom industry did not get any appreciable advantage from these duties while the mills were immensely benefited. They do not agree with the statement of Mill Owners' Association, Bombay, to the contrary, and correctly so.

(v) From 1929-33 there was the revival of Swadeshi Movement and unfortunately the handloom weaver suffered the most, though Congress perhaps never meant it. The cloth made by the Indian mills was spun from yarn made by themselves, while the handloom industry depended upon imported yarn and thus the cloth produced by the latter was rightly dubbed as foreign as it was made from foreign yarn. There was no arrangement made to force the mill industry to give certain quantity of yarn compulsorily to the handloom industry. Mills were further unscrupulous to manufacture cloth like Khadi and thus deprived the handloom weaver from taking full advantage from handspun yarn. Thus it is quite clear that the mill industry has benefited from every measure adopted by the Government or by the public and the poor weaver has to pay the penalty of his poverty. He has been forced to compete with his highly organized competitor and thus has been sent to the wall.

(vi) All this resulted in many looms becoming idle. Handloom industry could take very little advantage of the growing markets of the consumption of cloth. In 1910 in the United Provinces there were 1,92,890 working looms and 51,362 idle looms. Out of the total 2,44,252 looms 21 per cent. remained idle. Out of the total number of 2,44,712 weavers in the United Provinces 63,139 (25 per cent.) weavers got only part-time work.

(vii) A question was raised about the unfair competition of the mill industry against handloom industry before the Bombay Committee. Though the competition was considered to be unfair and required an immediate remedy yet the question was left over since nothing could be done by a Provincial Government and Central control was found necessary. However, the promoters of handloom industry created public opinion on the point and it resulted in the appointment of the Fact Finding Committee, Handloom and Mills, 1911.

(viii) The Fact Finding Committee pointed out that "the fact that the handloom industry is totally dependent upon its rival, the mill industry, both foreign and internal, for the supply of its basic raw material very much weakens its competitive position." They further pointed out that "the cost of production of the handloom weaver, so far as yarn is concerned, is high on account of (a) the profits, legitimate or otherwise made by the chain of middlemen, (b) packing, freight and handling charges, cartage, etc., (c) interest charges, (d) the various other charges such as insurance for fire risk, godown rent, commission and discount paid by the series of middlemen."

(ix) Attempts have been made several times that the co-operative societies made of the weavers be provided with yarn directly from the mill but the proprietors and their agents never agreed to such a proposal and whenever they agreed, the agents were able to undersell the yarn against their own mill prices. Not only the agent's charges were thus forced to be paid by the weaver, there existed a number of mal-practices in yarn trade. The Fact Finding Committee had

described them under three heads, viz., (a) lower counts of yarn are passed as higher counts, (b) correct counts of yarn are sold but the banks are shorter in length, (c) slightly higher counts of yarn are passed on as lower counts. The details of these mal-practices are very well illustrated in the report. This is not all. The Committee further observes "again the yarn which is sold to the handloom weaver does not bear any indication as to the standard tensile strength for the particular yarn for the particular counts. The combined spinning and weaving mills, in the majority of cases, sell yarn which is only fit for the weft and which is used as warp by the weavers. Besides, there are 'rejects' i.e., yarn of various counts and strengths which are packed together and exposed for sale. The weaver can only come to know of this or other defects at the time of preparing the yarn. Then again the yarn dealers particularly have yarn spun with a very low tensile strength which are passed on to the handloom weavers." These difficulties have been admitted to be existing by the Chambers themselves and clearly point out that they are not likely to be removed unless the Government forces the mill to be straight and provide deterrent punishment.

(x) The Fact Finding Committee have rightly put a question to themselves whether handloom industry should be replaced by the mill industry and they have given very cogent reasons for the survival of the former. The reasons given by them in favour of its survival are, briefly, as follows: (1) Handloom industry, next to agriculture, is the largest single industry in the country and has given occupation to several millions of people. (2) The main economic problem of India is unemployment and under-employment of large masses of people. As a mean of solving this problem large scale industrialization in India is so far ineffective. (3) A fundamental cause of India's poverty is the tendency to an unequal diffusion of purchasing power. This defect cannot be rectified by the expansion of factory industries unless large social and economic changes also take place simultaneously. (4) Decentralized production even of the handicraft type is not so uneconomical nor so inefficient as is often assumed. (5) Decentralized production has also important military and tactical advantages. (6) There is a special reason for the preservation of small-scale industries. It is partly economic, partly social. The village has been the backbone of India's economic as well as cultural life. If industrialization involves the decay of village crafts and the concentration of workers in cities it would greatly undermine the "serenity, poise, dignity, spaciousness, proportion, graciousness, deep-rooted sureness and elemental simplicity and beauty."

(xi) I recommend, therefore, that (1) existing cotton mills should not be allowed to weave their yarn into cloth, beyond a fixed maximum, (2) new cotton mills should not be allowed to use more than 25 per cent. of their yarn for weaving, (3) all mal-practices in yarn should be made punishable and prosecution should be cognizable, (4) yarn should be made available at the rates fixed by the Government which may not be higher than the rate at which yarn is available to the factories themselves, (5) certain types of clothes which have been the reserve of the handloom industry before 1914, should not be allowed to be manufactured by the cotton mills, (6) Provincial Government should start their own spinning mills or encourage spinning mills to be started.

(xii) Since all these recommendations except the last require an all-India enactment, steps should be taken to move the Central Government to pass these laws at an early date. Effect to the last recommendation may

be given as early as possible so that yarn may be made available to the weavers at reasonable rates and they may no more be forced to starve.

13. **Cotton Weaving**—(i) Weaving can stand well in competition with mills rather than the former has certain advantage in varying individual designs not available to mill manufacture. Cotton weaving is spread all over the province. Tanda (Fyzabad), Mau (Azamgarh), Sandila (Hardoi), Maghar (Basti), Meerut, Etawah, Moradabad, Amroha, Billari, Mau-Aima (Allahabad) are well-known centres of cotton textile production. Among handloom cotton weaving centres are also included Duree and Newar-weaving. Agra and Khairabad (Sitapur), Sambhal (Moradabad), during the war at almost all handloom weaving centres, but the old centres Pile carpets are made at Agra, Fatehpur (in Bara Banki District) and Shahjahanpur. Newar-weaving, though an old industry, has developed during the war at almost all handloom weaving centres but the old centres of Meerut, Agra, Moradabad and Cawnpore are still very important. In Meerut power-looms have been extensively introduced. Looms for weaving were introduced before the war. Some of the power-looms, working on the automatic multiple principle, were also locally made. Such indigenous manufacture of machines and tools is a healthy sign and deserves encouragement. During war, Tape-weaving and new designs in Newar with a display of colour is a new innovation.

(ii) The detailed survey made in 1933 showed the number of Throw-Shuttle looms as 1,17,000 and of Fly-Shuttle looms as 50,000 providing work for 5,04,000 workers. 52,000,000 lb. of yarn was consumed, out of this 43,000,000 lb. of yarn was supplied by the Indian mills. 65 million pounds by hand-spinners and the balance about 10,65,000 lb. was imported. This does not, however, include 36,75,000 lb. of artificial silk which was also consumed over these looms. 60 per cent. of this yarn was of coarse counts 10 to 16; 24 per cent. between 18 to 24; 4 per cent. above 40 and 7 per cent. below 10. The yarn of high counts was imported. The pre-war estimate of the cloth produced on handloom was 30 crores of yards.

(iii) Like the last war, during the present war also yarn could not be imported and handloom industry suffered a great deal on that account. To add to their difficulties textile mills began to consume their own yarn to a great extent and very little quantity of yarn remained available to the handloom weavers. A new class of middlemen cropped up in the meantime and they, by fair means or foul, tried to secure as much yarn as possible and thus the actual weavers were left at the mercy of these middlemen. The percentage of profit ran high and the higher the profit the tighter became the hold of these middlemen over the weavers. Most of these weaving concerns did not even own a single loom nor any place for weaving but only exploited the weavers by supplying them yarn and purchasing cloth made from it at their own rates and terms. The Government did not care to give preference to the actual weavers in the distribution of yarn and thus the poor weavers could not get the benefit of circumstances that prevailed during the war. Factories manufacturing yarn did try all possible methods of supplying the least quantity of yarn out of their factory and that too did not consist of proper quality.

(iv) The fact that the industry has survived these hard days, speaks well of the sustaining power and resourcefulness of those engaged in it. An unfair advantage was taken by the organized mill industry of the conditions created by the war in supplying to cottage workers inferior yarn and sometimes no yarn. The Textile Control Board took very little account of the difficulties and requirements of the handloom industry. Those responsible for control thoughtlessly imposed the

same restriction on handloom industry that had been imposed on the mill textile industry without making adequate arrangement for the employment of the handloom workers by supply of adequate quantity of yarn at controlled prices and without making any allowance for its special needs, as was done in Madras where co-operative weaving societies and several weaving establishments were granted concession to secure yarn at ex-mill rates and import dyes direct for their use. This mill industry is protected and still claiming further protection. The Fact Finding Committee pointed out that during the last war production of mills went up considerably. During the present war this point ought to have been noted and properly utilized in clothing the people. If proper steps would have been taken there would not have been a cloth famine in India and wealth would have been properly distributed.

14. **Power-looms**—(i) Before the war, efforts were made to instal power-looms factories so as to weave sarees with Jacquard borders. The factories were set up at Banaras, one at Mau-Aima with about fifty looms, four in Cawnpore and one at Kanauj with about 80 looms in all. They produce small filter cloth and bandage cloth. No details of production could be available. Before the war the factory at Mau-Aima used to produce sarees suitable for consumption in the Central Provinces. They need mercerized and ordinary twisted yarn for the warp. They had no arrangement for preparing sized warps with ordinary single yarn.

(ii) Power-looms against small looms may be a legitimate question for enquiry. In the near future when we are likely to have enough power available in the province, energy may have to be used for the plying of looms as well. Instead of stopping the introduction of power-looms we shall have to find out an outlet for the production of article on a bigger scale in a manner so that large number of people may not have to be thrown out.

15. **Dyeing and Cloth Printing**—(i) Calico printing by hand is an important industry in the United Provinces. The well-known hand printing cloths in Farrukhabad, Lucknow, Pilkhua (Meerut), Jahangirabad (Bulandshahr), Muttra and, Tanda. Curtains, bed-sheets, fards, liliats, sarees and dress pieces are the main items which are dyed and printed. Muttra is noted for its Ram-Nami print in single colour. Pilkhua and Jahangirabad are of recent development. Tanda supplies cheap prints for markets in Nepal. Over 5,000 persons are engaged and the production is valued at Rs.1,50,00,000.

(ii) This industry has suffered a great setback during the war because of the extreme shortage of synthetic dye and also because of the fall in export trade. The industry bucked up, but there are far too many restrictions at present in the movement and issue of textile fabrics and this is responsible for high prices. No systematic effort has been made to help and guide hand-printers in such a way as to enable them to get certain amounts of cheap cloth at controlled prices and to secure the sale of their products through a reliable agency. It is regretted that the cream of this trade goes mostly to the middlemen who employ the workers for their own ends. They certainly supply capital and sometimes the design but their charges for these things are too high. They in the mad rush of producing cheap articles copy unscrupulously design made by others, use cheap colours, which soon fade away, do not keep to any standard and thus get a bad name in the foreign market, and lastly they do not care to save the hen which laid golden egg. Government should take steps to

organize this important industry on co-operative lines. Either middlemen may be altogether eliminated or they must be allowed to continue under control, so that the standard of goods may be maintained and proper wages are obtained by the workers so that a flow of new material may continue and the trade may flourish.

16. **Silk Industry—(i)** It is very strange that although the province consumed the largest quantity of silk it does not produce any silk of its own. Many efforts are said to have been made in the past in this direction and it is said that local conditions did not encourage development of sericulture. I feel that sympathetic, systematic and sustained efforts are still required to be made to produce silk in the province. Since the Government of India has established a Central Sericulture Station at Behrampur (Bengal), a serious effort be made to produce a suitable breed of silk worm in the province. We have practically all the climates in the Province and there does not seem to be any reason as to why we cannot establish a suitable centre for sericulture.

(ii) In and around Ahraura, district Mirzapur, silk worms grow wild on Asna trees. A beginning may also be made by trying to develop these very breeds. The Committee that had gone into the question of sericulture in the past have said that there are tracts in the United Provinces where silk-rearing is possible. Since then there have been numerous improvements in silk production and it would be in the fitness of things if a frantic effort now be made. Mulberry practically grows all over the province and so also the castor plant. We have only to find a suitable breed for different localities or we have to select a place where existing breed is likely to survive.

(iii) Sericulture is a useful subsidiary occupation for agriculturists and the Committee recommends that plans should be prepared in future so that it may become a side occupation for agriculturists as it has become an important occupation in Mysore. During the period 1930-10 Japan had completely ousted Indian indigenous silk from the market. There were two reasons for this, viz. Japan reeled its silk better and exported specially prepared warp silk called Organzine. The prices were very low as compared with the cost of silk produced in Bengal, Kashmir or Mysore. Research is needed to investigate why silk cannot in the same way be produced more cheaply in the province. The Committee finds that during the war Benares silk weavers continued to consume the stocks of silk obtained in very large quantities before the war and are now going for Indian silk. But the craving is still for Japanese and Chinese silk and the Indian filatures must look up to over-come this prejudice. The other centres outside Benares, consuming power and using reeled silk, were; Mubarakpur and to small extent Mau. Mubarakpur had been consuming silk for making Shalta, a kind of cloth resembling Satin and for Sanghi, a kind of cloth used by Muslim ladies. Other centres of silk weaving are Shahjahanpur, Sandila, Mau, Billari, Pilibhit and Etawah. These were using spun silk and waste silk. Spun silk is used largely in Benares also for producing Chaddars, shirtings, dhoties and suitings on fly-shuttle looms. These used to be known as Kashi silk to distinguish them from brocades and bold thread work of Benares. The spun silk yarn was all imported. It came from Italy. Later on Japan ousted every other country. All other centres produced mainly shirtings and suitings. It is estimated that there are 50,000 throw-shuttle looms and 5,000 fly-shuttle looms employed in weaving all varieties of silk and giving employment to 1-10,000 workers. The production of silk before the war was estimated.

to be 18 crores of yards valued at 9.5 crores of rupees. The Benares gold thread sari and brocade weavers are still sticking to their intricate harness for the jacquard. But the majority of those using the spun silk use fly-shuttle looms with doby or jacquard introduced from time to time for the benefit of the handloom industry. Benares and Mau produced their own jacquards, the price of which has gone down to Rs.50 as against Rs.100 which was the price of imported jacquards. In fact, if useful but costly foreign tools and appliances could be locally made they would provide employment for local labour and prove cheaper.

War—(iv) During the war Government was forced to get parachute cloth prepared in the country and they tried all the means to utilize the existing resources for the purpose. But as these resources were quite inadequate both from efficiency, and quantity point of view, special efforts were made to overcome the difficulties. Though nothing was done to help the silk industry in the United Provinces but the efforts are noteworthy and must be adopted. They clearly point out that given the necessary equipment and guidance a great deal can be done to secure the right type of articles and within a very short period. It may not be out of place to give the details of action taken by the Government of India in this connection.

(v) In November, 1943, two experts were obtained temporarily from England to advise the Government of India, one on silk reeling and other on parachute cloth weaving. They toured the country and assisted mills with suggestions for improving reeling of filature raw silk and for weaving parachute cloth.

(vi) According to the Tariff Board Report (1940) there were 105 silk weaving establishments in 1937 employing about 4,700 workers but the great majority of them used imported silk. As a result the sericulture industry (which produces the raw material) fell on evil days. The production of raw silk by the charkhas continued and even in 1937 their total production was estimated at about 6,00,000 lb. which was mostly used by the handloom weavers for saris and shirtings and other garments.

(vii) In 1941 Government purchased 300 tons of Iranian cocoons available in India and gave to Kashmir filature for reeling. In 1942 with the co-operation of His Majesty's Government a scheme was initiated to increase the output of filature silk available for parachute manufacture involving the installation of about 3,500 new basins in three main silk producing areas.

(viii) In Madras the Government is understood, as a part of the scheme, to arrange for the erection at Kolyal of 500 basins, capable of producing 1,50,000 lb of reeled silk in a year. In Bengal arrangements were made for setting up about 1,500 basins by private persons with the financial assistance (loans) of the Government of India. In Mysore 200 basins at the State-managed filatures at Kankanhalli are being constructed at the expense of His Majesty's Government. Mysore proposed to set up about 1,800 basins. In 1943, the outturn of silk came to about 3,00,000 lb. including all the four centres. The estimate for 1944 is 6,00,000 lb. It may have gone up to a million pounds in 1945.

(ix) As to improve the quality of raw silk it is essential that it may be properly tested, one fully equipped conditioning house has been established at Calcutta and two others are proposed to be built. The machinery does not raise any complicated problem. They are now

imported, but attempts are being made to make at least parts here and thereby to obviate the need for dependence of imports.

(x) I wish all these efforts to be continued in future but the Provincial Government should take full advantage of the Central Sericulture Institute, so that we may not only supply our raw silk but may be able to produce as good a silk as we were purchasing from Japan before the war. Till silk is not produced cocoons of silk may be purchased and silk prepared in the province.

17. **Woollen Industry**—(i) Sheep-rearing is a very old occupation in the province and it has now been entrusted to illiterate people. It may be of interest to mention that the sheep of our province is the hardest animal which can subsist upon the least amount of forage. Perhaps it may not be wrong to say that our breed produces the large quantity of wool in comparison to the weight of animal or the quantity of food consumed by it. Australian animal and that of England have Indian blood in their veins. It is pity that no efforts have been made to ascertain as to what part the breed and the food play in the quality and quantity of wool produced. No attempt has been made to popularise the best breed and to find out the details under which economic production of wool is possible. The Agricultural Department which has now the Animal Husbandry section separated must come to the help and make investigation and provide economic breed for different localities.

(ii) The Industries Department should introduce proper method of clipping and grading of wool, so that this side industry of the agriculturists may not die out and it may add a reasonable income to the slender resources of the poor.

(iii) Better and efficient clipping is the first requisite, and the second important thing is grading. After both these processes comes the carding. Luckily, small machines for carding have been introduced during the war. Carded wool by machine produces better yarn than made by hand-carded wool. In the case of machine cutting of wool is avoided also and the fibre of wool, therefore, remains longer saving the labour involved in cutting. These machines are small and are worked by small motors. They can also be made to work by bullock power. This innovation will be of great help in developing woollen industry.

(iv) I am surprised to learn that the All-India Spinners' Association does not class the woollen yarn and cloth in the definition of Khadi, if the carding of wool is done by machine. We do not think Mahatma Gandhi would like to shun everything mechanical. There seems to exist some misunderstanding on the point and I appeal to the Association to re-examine this question and remove the ban. In the first place, we envisage provision of electricity in every village of India and secondly these carding machines if so desired can be made to work with bullock power also. If all types of power is to be avoided we shall be depriving the cottage worker of all the mechanical inventions of the age without which he cannot exist. Mahatma Gandhi declared his principle about the use of machine so many times and he does not seem to be against all types of machinery, big or small. At any rate I strongly recommend the common use of these machines. All facilities for their introduction by the Government must be provided.

(v) There is yet another advantage in the introduction of these machines. Carding of wool is injurious to health, especially to the eyes and this is all the more reason that the use of carding by machine may be popularised.

(vi) Wool spinning presents the same difficulties as cotton spinning, rather more. Spinning of good yarn by hand is both expensive and inefficient. Let the art of spinning by hand be encouraged but at the same time spinning factories may also be established on behalf of the Government or on a semi-Government basis so that India may not have to look to Japan or Germany or Australia for yarn supply. We must confess the weakness of our process and should take advantage of knowledge and inventions available. The very fact that we import large quantities of yarn from foreign countries justifies a legitimate demand for its production in the provinces.

(vii) I am sure weavers can stand on their own legs if yarn is made available. That being so, woollen spinning mills like cotton spinning mills, be prohibited from extending their activities to weaving. The cottage woollen industries use mainly hand-spun yarn in the production of carpets or tweeds, thulmas, pankhis and pattoos of the hills. The blankets are all made of hand-spun yarn. Superior carpets are made at Agra and to a smaller extent in Mirzapur, from imported mill spun yarn. In Agra, Australian wool used to be imported from the superior variety of pile carpets. Before the war the weaving of chaddars or shawls with imported yarn had become popular in the hills, also at some centres in the plains. The carpet industry is concentrated in the districts of Mirzapur and Benares including Benares State and Agra. Blankets are made all over the province, but the main centres are in the districts of Muzaffarnagar, Meerut and in Najibabad (Bijnor).

(viii) Before the war there used to be 30,400 throw-shuttle looms and 150 fly-shuttle looms for the weaving of blankets and tweeds. The number of people engaged in weaving was about 97,000 men producing 30,50,000 yards of woollen fabrics.

(ix) Pile carpets deserve special mention as they form the bulk of woollen article produced in the province. As already stated Agra, and Mirzapur are the main carpet-making centres, but they produce expensive carpets. There are about 150 other smaller centres in the districts of Mirzapur, Jaunpur, Allahabad, Benares State and Shahjahanpur where cheaper varieties of carpets are made. About 18,000 looms are in Benares and Mirzapur areas, which alone consumed 1,16,000 lbs. of yarn per annum. Superior carpets are sold as high as Rs.120 per square yard.

(x) Carpet industry suffered very much during the war as the bulk of the production was meant for export. In Mirzapur and Benares the Industries Department and the Benares State found an alternative occupation for export weavers in the production of Barrack Blankets for soldiers. The end of the war has given a new life to this industry in these areas and all the weavers have come back to their looms. The industries have benefited by blanket production to the extent that much more woollen yarn is now available in these very areas. The women are still fully occupied. In fact this area is ready to consume all the yarn that can be made available. It is said that, at present 20 lakhs square yards of carpets valued at 16 million rupees are produced. The carpet manufacturers expect this boom to continue for some time to come. I agree with the Committee that the industry required control by Government so that the quality may not deteriorate. Complaints are reported to have come already of cut-throat competition and other undesirable practices and there is great danger that the market may be lost. It is possible to control at least the quality meant for export and this will be of great

benefit to the industry without causing any loss of legitimate profit to the producers. At present many new capitalists without previous experience have rushed to this business and created a new and dangerous problem for the industry. This is another reason for recommending some form of control to help the workers otherwise the continuance of the existing conditions may bring about the ruination of the industry.

18. **Blankets**—(i) It is very gratifying that when Government stood in need of blankets our province came out successful in the attempt of manufacturing the required standard of the blankets. In 1940 the Supply Department in New Delhi held a conference of Provincial Governments and of the States. Order for blankets were given to the United Provinces, the Punjab, North-West Frontier Province, Patiala State and other provinces and States. By 1941, production from all these areas amounted to a million blankets. But in 1942 the quality deteriorated. In 1943, 2,50,000 blankets were supplied by the handloom factory, bulk of which having been produced by the United Provinces Industries Department. In the year 1941 it was estimated that United Provinces supplied 40 to 50 thousand blankets per month. This improvement was only possible as the Department of Industries, United Provinces dealt with the weavers direct while in other places contractors were employed.

(ii) The Industries Department supplied about 19 lakhs of such blankets valued at Rs.1,50,00,000. This gave the much needed income to the people specially in rural areas. Extra income went largely to the spinners who never had such steady demand for yarn before.

(iii) All this credit of the Industries Department loses its significance when I note with regret that the Department did not lose even a few days in closing centres for blanket manufacture. Though the present Committee was sitting yet the Government did not see their way to seek the advice of the Committee. The callousness in disbanding a huge army of soldiers who stood in good stead in the supply of this urgent commodity deserves the strongest condemnation. It shows in the first place what an organized effort can achieve and shows on the other hand that the Government is not all interested in the Development of the Industry but, they do care to utilize the available skill for their own ends. If the industry gets any advantage it is only by product never conceived of in that spirit.

(iv) The Department had installed towards the end some finishing machines and utilized its own finishing plant of Najibabad also, but no organization was developed which could take up even one of its centres and run it for the future benefit of the blanket industry. I feel with the Committee that it was possible for the Department to organize production centres which could be developed into flourishing co-operative societies even after the termination of war if due attention had been paid to the importance of such a step.

(v) The improvised machines which the Department of Industries has used could be replaced later on by better ones. If necessary, imported plants, as they have at Panipat, for finishing and for spinning yarn or special slivers could be supplied to the spinners for the production of better and more uniform yarn.

19. **Woollen Industry in the Hills**—(i) The Industries Department has a scheme for the development of the Woollen Industry in the hills. The Committee notes with regret that changes were made in the development scheme far too frequently with the result that no substantial improvements

could be made. The Department had to fall back upon its own production centres for the supply of yarn in which workers were merely wage-earners. No effort was made to organize co-operative societies. In fact, the existing societies were killed or allowed to die. This cut at the very root of the original idea underlying the scheme, viz., organizing the workers and developing the entire organization in a manner that the whole working and management could be done by the workers themselves. There has been some improvement in designs and quality but it is commensurate with the expenditure involved. I feel with the Committee that during the war these schemes were not worked effectively to meet the extreme shortage of woolen fabrics and thus give permanent market to wool workers.

(ii) I further regret to say that there seems to exist a desire for grabbing power at the expense of the poor men between the Department of Industries and Department of Co-operative Societies. Both Departments try to start societies of their own and pull against each other to the detriment of the workers themselves. They in this drawn battle kill the very man for whose protection they had started. This is very unfortunate.

20. Knitted Goods, Hosiery, Chikens, Fancy Laces, Buttons, etc.—(i) The cottage hosiery industries starved during the war although it developed very much, during the pre-war days. The main difficulty arose in the matter of yarn and needles. These were rationed and those having war orders were given preference, in the matter of their supply. The cottage hosiery industry was, however, mainly confined to the manufacture of socks and stockings. If it is properly organized it has a very good potentiality of capturing the market but small power machines may be more suited and helpful for the work.

(ii) Lucknow chicken work is very famous and many women were generally living upon it. The industry also finds place in other localities but machine-made cheap material and exploitation of middlemen has damaged the industry considerably.

(iii) Some lace work is being done in some places but this too has not assumed an important place. In Madras both the chicken embroidery and lace work is being organized on a commercial basis and the industry feeds many poor folk. There seems to be absolutely no reason as to why we cannot do the same in our province.

(iv) Cotton buttons are made practically in every place but no attention is made to create new designs in that line. So far the industry has survived on account of its cheapness.

Leather and Leather Goods

21. General—(i) India has third of the total cattle of the world (250 million cattle besides 48 million sheep and goats). India has long been the world's largest supplier of hides and skins. India's output was estimated at about 21 million cow hides, 5½ million buffalo hides and 25 million skins (goat, sheep and kid). India stood first in the matter of hides and U. S. A. came second. Three-fourths of cattle hides are from animals which die a natural death and not from slaughtered cattle as in other countries.

(ii) Before the war 40 per cent. of our cattle hides and 55 per cent. of the skins had been exported. A portion of the cattle hides was exported in half-tanned condition.

(iii) The province produces a large number of hides and skins and contributes nearly 25 per cent. of the quantity exported out of India. In 1943-44 the Province exported 3,09,945 maunds of hides and 1,07,673 maunds of skins. Cawnpore is the principal centre of trade in hides and skins.

(iv) There has been improvement in flaying in the slaughter-houses but conditions in the rural areas are still the same. United Provinces hides are not yet classed as superior. The Hide Cess Committee of 1928 drew the attention to the flaws and suggested remedies which did not receive the attention they deserved. We strongly recommend that Government should see to the removal of these defects at an early date. Proper grading for export and tanning will encourage improvements. There is enormous loss due to bad flaying and curing.

22. Tanning—The resources of the United Provinces in hides and skins and babul bark, being large, the development of the tanning industry is but natural. The beginning of factory tanning was made by the Ordnance Factory at Cawnpore in the first quarter of the nineteenth century. Cawnpore has now all the modern tanneries of the United Provinces except one at Dayal Bagh, Agra. Tanning is of three types : (i) Modern Leach process tanning, (ii) pit tanning or layer process and (iii) bag tanning. The bulk of the tanning is done with vegetable extracts. In fact, the word tanning is derived from the chemical substance "tannin" found in vegetable extracts. Skins are usually tanned by the pit or layer process while bag tanning is practised mostly in villages. During the war the industry expanded several times. The total production of leather in all tanneries is estimated to be worth Rs.34,00,000 in normal times, but during the war it rose up to 2 crores. 76,048 maunds of leather of all kinds was exported in 1943-44.

23. Cottage scale—(i) Bag tanning is followed in villages from times immemorial and the main tanning material employed is babul bark.

It produces leather suitable for Deshi shoes and produces lighter hides for (Charas) or water-lifting buckets and "Mushak" or the shole skin used by Bhistics or water-carriers. A very large quantity of dead hides and lighter hides is consumed in this manner. During the war, bag-tanned leather had to be used for lighter footwear and other articles.

(ii) Next to textile, leather is the most important industry. It is a pity, though the United Provinces has got all the facilities for the development of this industry yet the cottage worker is the least helped person. When so much is said to help the depressed classes the neglect to improve the conditions of this industry which is mainly followed by the Chamars in villages is simply criminal. Government cannot justify their inaction in this matter. Even if we would have arranged to send all hides after tanning, we would have placed large sums of money in the pockets of poor people and would have supplied a large population with productive occupation. The method is simple and the raw material is at hand.

(iii) To open a few schools for leather working is not of much help to the workers in trade. Nothing has been done to improve tanning in village or to help the people to get out from the clutches of their creditors. During the war emergency, it was necessary to introduce methods of tanning from vegetable extract in shorter period and that could be done. A process which required six months to complete itself now takes only three months and the leather prepared is in no way inferior to the one which takes a longer period.

(iv) Chrome tanning which is the most paying method of tanning should be introduced on a small scale. The experts simply repeat that it cannot be done. They quietly forget that even today chrome tanning is done by the Chinese in India in their own homes. All-India Spinners' Association is said to have evolved a successful method in chrome tanning.

(v) No attempt has been made to grow tanning material and to find out the tanning contents of the different articles available in the province. I recommend that immediate steps should be taken to improve the village tanning and to introduce chrome tanning on a cottage scale. If Chinese experts are willing to give out their process and secret they may be employed at some centre and the art may be learnt and disseminated. Further, I recommend that steps should be taken to grow and develop tanning material and produce tanning extracts in the province.

(vi) During the war both bark and chrome tanning have improved and many small establishments were newly started. System of reducing tanning period from six months to three producing the same type of good leather, must be introduced and improved.

(vii) Considerable improvement in village tanning is necessary. The Industries Department had launched a scheme to develop village and small-scale tanning. The scheme had been appreciated very much but has recently been abandoned. Whatever may be the difficulty of the Department, efforts to improve village tanning are necessary and this industry, which gives employment to a very large number of persons belonging to poor and depressed classes, should rank high in Post-War Department scheme. Sustained efforts, especially by means of demonstration tanneries, in which workers may be organized on co-operative basis, are very desirable.

(viii) Patent leather is made in Agra, because imports have stopped, it has a good market. It used to crack badly and had become unpopular. It is claimed that this complaint has been overcome. It is a cottage industry capable of development with proper technical guidance. Manufacture of patent leather is a highly technical process and steps should be taken to produce first class articles in the Province.

24. Manufacture of Leather Goods—(i) The province is famous for its leather goods, footwear, suit-cases and other travelling requisites, harness and saddery. In fact, the first Ordnance Factory established at Cawnpore was and is still called the Harness and Saddlery Factory.

(ii) There is a very big scope for developing leather trade and making all types of costly leather and leather goods which are being imported even now.

(iii) The bulk of the footwear and other articles are, however, produced in small workshops and cottages of individual workers. It has been estimated that about 1,50,000 workers are engaged in this trade, 50,000 of whom are at Agra, 27,000 at Lucknow, 20,000 at Cawnpore and the rest scattered all over the province. The value of the production is estimated to be 8 crores of rupees. The produce includes village *charsa* and plough harnesses as also the finest shoes and suit-cases. The industry is organized through factories which play the most important part at Agra, Cawnpore and Lucknow. Very large quantities of footwear are exported to places outside the United Provinces.

(iv) The footwear trade was controlled by the Footwear Control Order. The manufacturers were required to mark retail prices. The maximum prices were given in the Control Order. The control has now been withdrawn.

(v) These controls have brought out the need for combined action by each branch of the industry and also the need for planning and rationalization. Improvements in wasteful methods and joint working both of production and distribution has engaged the attention of the industry. Research in the technical field and organization for distribution on the lines of Bata and Flex footwear are the immediate necessities of the industry. It will be national catastrophe if this industry is passed in the hands of moneyed and organized foreigners who employ the indigenous workers as mere labourers.

(vi) It must be noted that in post-war days there is likely to be a world shortage of leather for footwear and other articles made of leather; that being so, it is the time for our province to play the game and take the largest benefit out of this opportunity. It is obvious that by judicious means we can provide work for thousands of people living in villages and utilizing them for the tanning of leather. If we export leather instead of hides and skins we can place more than a crore in the pockets of the poor. The better the tanning higher the price available. We wish that immediately an organization may be started so that not a single hide or skin may be exported.

(vii) Small machine suitable for cheap production may be introduced so that efficient and cheap leather articles may be made and exported.

25. **Grindery**—(i) Before the war India used to import heel, toe-tips, eyelets, nails, thread, etc. (known as grindery) from abroad. When importation became impossible, India had to rely upon its own resources. It is creditable for the cottage worker that he produced all these articles by equipment and tools of his own make. They may not be efficient and the articles produced may be a bit inferior but this gives credit to the ingenuity of our workers.

(ii) The following are the production figures of heels, toe-tips for the whole of India :

Prior to 1941	..	nil.
1941	..	69,20,000 pairs.
1942	..	2,41,70,000 "
1943	..	2,81,14,000 "

The above is a remarkable record indeed. Will the Department of Industries now help these small men to supply them with the necessary tools and technical advice or suffer them at the hands of importers or quietly hand over this industry to the capitalists? We hope and trust that justice will be done in encouraging these struggling people and steps will be taken to establish this industry on a sound basis.

26. **Glue**—(i) Glue is made practically in every big city. It is made either from fleshings, leather-scrap or from bones. In our province the main raw material is fleshings or leather-scrap. The Committee visited the people engaged in this industry at Cawnpore. The number of persons employed in this profession are more than 700. There are two big muhallas consisting of about eighty families each. During the war there was a great demand of glue and a factory for its manufacture to meet the supply of War Department, was set up in Agra. But the same has now been dismantled. Fleshings are boiled in open fire and the decoction is left in earthenwares to freeze into glue. This is then cut in small pieces and left on cots to be dried in the sun. Climate is generally the limiting factor in the manufacture of glue. The climate should not be hume nor sa hot so as to melt the glue. On account of this difficulty glue-making is suspended during the rainy weather or when the sun is too hot.

(ii) The process adopted is too crude. Direct use of fire colours the products as well as destroys the adhesive strength of glue. The price paid, therefore, is very low. India imports a large quantity of glue every year from foreign countries and it is a pity that even such a simple industry has not been well organized to produce high quality of glue at a commercial centre which has full-fledged technical Harcourt Butler Technological Institute. It seems to be an imperative and immediate need of the hour that the whole process may be so designed that ordinary workers may take advantage of the same and may be able to produce glue during all the seasons of the year.

(iii) Glue can be made from fleshings, leather-scrap and bones. Raw material will depend upon the facilities available in the locality. No attempt seems to have been made to utilize other resources and to make glue products for industrial use.

27. **Gut—Gut** manufacture is done on a small scale in many places and the main purpose for which it is used is for carding. Sialkot in Punjab has a flourishing trade in this industry and with a little guidance we can easily manufacture this article in most of the places in the province. A detailed organization will, therefore, prove a paying proposition in establishing this important industry.

Metal Industries

28. **General—(i)** Metal sheets were produced by rolling mills both at Hathras (Aligarh) and Rewari in Punjab and we hope this industry will be well established after the war.

(ii) India has neglected the manufacture of alloys and as long as this is not undertaken on a scientific basis, we shall always lag behind in the production of metal goods. With a little scientific knowledge and necessary types of controlled furnaces, work can be taken up with advantage. War has introduced many new alloys whose utility has been recognized. As soon as the transport position improves some of these alloys and articles made from them will flood the Indian market and then we shall be at the mercy of foreign manufacturers, I, therefore, recommend that all literature on alloys and their uses may be collected and methods of their manufacture may be studied and disseminated for the information of general public.

29. **Light Casting—(i)** Small hand pumps, fittings, crushers, etc. are made on a small scale at number of places. Small domestic machines are also manufactured and so also weights, dumb bells, paper weights, etc. There is more scope for such small workshops in the interior. They will not only give employment to a number of people but will be useful in giving metal sense to the workers. Small machines for different industries may also be introduced.

30. **Iron Utensils and Agricultural Implements—(i)** Iron domestic utensils like pans (*karahi*), *tawa*, *chimta*, etc., are made all over the province and there are small cottage centres almost in every district. Cawnpore and Agra has many small workshops which send out their products to villages also. These workshops make ploughs, *khurpies*, hoes and other agricultural implements. Cawnpore, Agra Bareilly and Ghaziabad made bigger agricultural farm equipments also and large pans for boiling sugarcane juice.

(ii) Persian wheels and other lifts are always in demand in villages and small works are being set up with advantage. Control on iron has been the main drawback in their development and even now the trouble

remains. Iron distributed through Department of Agriculture does not reach the small workers in remote areas but is mostly grabbed by big workshops. Village smiths have been assisting the agriculturists in providing them with agricultural implements, plough, charas and other small implements and they should have the priority in the supply of iron. Their utility must be extended and they should not be allowed to starve.

31. **Iron safes**—Iron safes are made by many small firms in various places in the provinces. If proper encouragement and guidance is given quite useful safes may be made by the village smith. It does not require any special equipment.

32. **Trunk making**—Steel trunks, light iron sheet trunks cash boxes, etc. are made in Allahabad and other towns. Allahabad is famous for trunk making and sends its products even to towns outside the United Provinces. These are all hand-made. Use of machines will further improve this old small industry. Supply of punched and shaped sheets will enable the existing centres to thrive.

33. **Cutlery**—(i) Scissors : Meerut is the oldest and the main centre for scissors. Before the war a 100 dozen of scissors per day used to be made. The industry met the internal demand completely during the war and some supplies were made for Defence Services also. The main difficulty is to get the proper type of steel suitable for good cutlery. After the article is made, it requires heat treatment for which some heat control arrangement is required. Central heat treatment workshops may develop this industry. Electricplating and annealing can improve the finish of the quality of the article to a considerable extent. The Industries Department organized production of scissors to War Supplies and produced 18,000 scissors.

(ii) Knives are made at Hathras and here again the same difficulty about heat treatment has stood in the way of improvement and expansion. Along with heat treatment, small electric grinding machines and power punches are needed to be introduced.

(iii) Skilled workmen do exist and they did much to meet war period requirements. They need the guidance and support they deserve.

(iv) Sialkot, Batala and Wazirabad are quite new centres in the Punjab developed in to producing very attractive and useful material. They have produced most of the surgical instruments with advantage though they started much long after us. In our province no attempt has been made to improve the finish or the quality of the material. If proper type of small machines for grinding, finishing be introduced this industry can be very well developed.

(v) Razors : A Meerut mechanic makes very good ground razors and is making about 3 dozens a day. If individual efforts can produce such nice articles, with Government help the industry can be easily developed.

34. **Locks**—(i) The province is famous for locks made at Aligarh. The industry owes its existences to the Postal Department. In 1860 the Postal Department established a metal workshop at Aligarh to meet the metal and lock requirements of the Department. Trained workers were imported and local workers trained in the technique of the manufacture of locks of the types of Chubba and Hobba, etc. The local artisans picked up the technique and started producing good quality locks.

(ii) On the closing of the Postal Workshop the discharged workmen started small concerns of their own and such firms multiplied in the years

following. The local manufacturing industry is not at present confined merely to factory production but is being carried on on cottage basis in Aligarh and in villages near about. Lock is not made from start to finish at one place by one individual. The various parts are made by different people and assembled and finished separately, the stages being manufacture of bodies and shackles, casting of various parts, fitting of levers, key-making assembling of locks, riveting, galvanizing and finishing.

(iii) Although there was a good market for better class locks, and manufacturers of the same got good prices in the market in pre-war days, yet the industry as a whole faced adverse competition with imported cheap locks. Locks which are made by pressing and stamping can be sold cheap and it may be desirable to introduce small punch and press amongst the cottage workers. Introduction of suitable standards may improve the industry to a great extent.

(iv) The total production of locks at Aligarh before the war was estimated at 10 to 15 thousand superior quality locks and 60 to 70 thousand inferior quality locks per month.

(v) During the war their demand increased considerably. The Supply Department failed to obtain timely supply of good locks from its contractors. The United Provinces Industries Department had, therefore, to take up the work at the instance of the Supply Department. The existing cottage and small scale organization of the industry was not disturbed. Control was established at the initial stage of manufacture of parts. A workshop was fitted up and local workshops were engaged to work as fabricators only. The parts were then distributed to cottage workers, who worked at their houses in the city and village. The assembled locks were checked up and finally finished under supervision in assembling workshops organized by the Department. The contractors failed to go beyond 1,000 locks per month, but the organization set by the Department took up the figures to 2,60,000 per month in 1943. Towards the closing period of the war, supply was maintained at about 1,50,000 per month. The total supply comprised 10,00,000 locks valued at about Rs.61,00,000. This proves beyond doubt what Government patronage and proper organization can achieve. Such patronage, however, should not be the work of the Department in case of emergency alone but such organization and help should come to the rescue of the industry even in normal times.

(vi) Along with the manufacture of locks, Aligarh had made a name for building and electrical metal fittings. Some of these products compare very favourably not only with the products made in other provinces, but even with the imported articles.

(vii) The industry needs organization of small producers to minimize unhealthy competition and consequent deterioration of quality. When once the division of labour has been well organized and its economic advantage has well been learnt it is but desirable that some organization to control the wages and different workers and profits of the assembler be controlled. Gradation of quality be introduced and the workmen be relieved of the worry of marketing. Of course, such a service must be cheap and efficient and this agency should not exploit the workers for their own ends.

35. **Wire-netting**—Manufacture of wire, netting—both iron and brass, has been developed during the war. There was some work in brass and copper netting being done in Calcutta from before. Now wire-nettings for

fencing is made at Cawnpore. Brass wire-gauze is being produced at Benares in a factory which was started to meet the Supply Department's orders but is now producing for civil consumption. There is a sufficient demand for brass and copper wire-netting for centrifugal machines and for strainers. If they are properly made we need not depend upon imports. Sugar mills and wells require fine gauze of iron mesh. Steel wire-gauze is used for building and other purposes while wire-netting would be useful for fencing purposes. So far the production has been made on emergency basis but there seems to be no reason as to why the industry may not be stabilized if proper study and research be made and the difficulties in producing quality goods are removed.

36. **Engineering Works**—The province has not unfortunately developed in the Mechanical Engineering industry to any appreciable extent. There had been great hindrances in the adoption of small modern appliances by the cottage worker. Small concerns have, however, developed in important cities mainly to meet the requirements of motor and cycle owners. Some of these concerns possess small machines and very skilled workmen and during the war, they claim to have produced all motor car parts. A few workshops have produced many parts, carriers, stands, spokes, etc. and an attempt was made to make bells also but success was not achieved. Many workshops grew up to meet the demands of ordinary factories. Many of the component soldered equipments were made in the workshop. The Harness and Saddlery Factory of Cawnpore alone is responsible for the growth of such workshops in Cawnpore. Government have a great moral obligation to see that the development made is not allowed to die on account of fall in the regular demand or comparative inefficiency of the workers. These workshops can be equipped with modern machines and appliances to produce innumerable little articles of every day use and that used to be imported during war days.

37. **Rolling Mills**—Small rolling mills for making iron rounds and flats from scrap iron have been set up in number of places. They have suffered from control but this is an industry which is likely to stay. The method should be improved and full use must be made of these small concerns. They compete in prices with the best factories in-as-much as they save in freight and use scrap as their raw material.

38. **Galvanizing and Tanning**—During the war black sheets were available but galvanized and tin sheets were not available. At several places successful attempts are made to prepare these sheets and to make articles from them. Water buckets, cans, etc., are thus being made from scrap iron sheets and new industry had developed. It may be doubtful if this industry will survive unless the difference in price of both types of sheets justifies it but it certainly shows the ingenuity of the workmen and their resourcefulness.

39. **Enamelling**—Signboards, food dishes, badges etc., are the main products. There are number of small firms making enamelled signboards. Benares University is also interested in this class of work. If properly organized it is an industry which can be started on small scale and has a big future before it.

40. **Can making**—Tin cans, especially for oil and ghee, are made at Agra, Hathras, Khurja, Etawah and Shikohabad. Besides other can making concerns there are numerous other tin-smiths in big cities like Cawnpore, Lucknow, Allahabad, Agra and Banaras who made watertanks, water-heaters, garden water pipes, buckets and tubs with galvanized iron

sheets. They made things to meet local demand and have a brisk trade. The method of manufacture and the shape and finish of the products leave much room for improvement.

41. **Electric Machinery and Equipment**—Electric fans were made at Cawnpore by the Ravi Engineering Co. and at Dayal Bagh, Agra, with Government grants. The Ravi Company has closed down but fans are being manufactured at Dayal Bagh and two new centres are expected to be established at Meerut and Lucknow. A Cawnpore firm is making electric heaters and stoves and iron and other domestic electrical appliances are made at Dayal Bagh. With proper help and guidance small centres for the manufacture of electrical goods of everyday domestic use may be organized.

42. **Non-ferrous Metal Industries**—(i) Small scale industries, domestic utensils are made at numerous small centres in the province, and some villages are famous, which used to do considerable trade with markets in India. Centres in rural areas are almost all for cast moulded disc. They depend upon old utensils for the raw material. Before the war many of the bigger centres obtained copper and zinc also. The statistics for all brass and copper utensils give an estimate of production during the war of utensils worth Rs.3,00,00,000.

(ii) The main centres for this type of work are Hathras (Aligarh), Mirzapur, Farrukhabad, Ccd (Kheri), Ajodhya (Fyzabad) Mallawan (Unao), Bindki (Fatehpur), Hardoi, Lucknow, Baraut (Meerut), Benaras, Bahraich, Bah (Agra). The utensils are also made out of sheet brass and copper. Sheet brass work is concentrated at Moradabad and is done to some extent at Banaras also. Moradabad produces a considerable quantity of brass moulded articles too. Some hand presses are in use for plain cups and saucers, but the bulk of shape making is done by hand. Copper utensils are in most cases of sheet copper and are made mostly at Lucknow and Farrukhabad. The production of brass and copper things is estimated to be as follows :

				Rs.
Moradabad	..	..	..	1,50,00,000
Mirzapur	..	..	..	50,00,000
Farrukhabad	..	..	..	45,00,000
Rest	..	..	..	55,00,000
			Total	3,00,00,000

(iii) During the war all non-ferrous metal utensil industries suffered very heavily.

43. **Ornamental Brassware**—Moradabad and Benares are famous for ornamental brasswares which are generally exported out of India. The type of work at both the places differs very much. Moradabad produces engraved and lacquered wares. Coloured lacquer or enamel being filled in the engraved designs. The total production exceeds Rs.3,00,000. Export suffered during the war but internal demand was enough to consume the reduced production. The value of production (Rs.30,00,000) is, however, not a true index of the quality as prices were about three times the pre-war level. The work is done by artisans at their workshops, each process is done by a different artisan. It is a cottage industry. Over 5,000 men are engaged in it. Banaras produces engraved and raised work. No lacquer is used and the art lies in fine engraving and repose work. It

seems to be desirable that some arrangement for the study of foreign taste be made and improvements may accordingly be introduced.

44. Cupro-Nickel and Electroplated Wares—The products are tea sets, service sets, forks and spoons and before the war lotas, thalis, tumblers and other service (non-cooking) utensils were also plated in large quantities, before the war cupro-nickel or German silver sheets and ingots come from abroad. During the war the main source of this alloy was stopped. There was a great demand for forks and spoons and millions of forks and spoons were supplied by Moradabad. Electro-plating of cupro-nickel articles has been popular. Tea sets, fish knives and forks and spoons of Moradabad are sold all over India. Ten per cent. of Moradabad's production is of these articles. Moradabad plating was once very famous but due to a rush for cheapness, the quality has considerably deteriorated. To save the industry some control over production and proper grading will have to be introduced. Moradabad is also famous for sheet, lotas, thalis, cups, tumblers, etc. These are either tinned or electro-plated.

45. Brasswire-drawing—(i) This industry has developed during the war very considerably at Aligarh and Banaras. Brasswire-drawing is an old art at Aligarh as the wire was required for lock-making. Local talents have developed brasswire-drawing at Aligarh. Silver drawing has also developed during the war. It used to be imported before. Copper wire is also drawn at Benares and some gold thread-making concerns succeeded in making insulated copper wire for electrical purposes.

(ii) Wire drawing industry has a great future before it. For establishing this industry on a peace basis up-to-date methods must be studied and introduced so that it may stand competition. Small machines for manufacture may be designed and introduced with advantage.

46. Gold thread drawing—(i) Gold thread industry is an important industry of Banaras in which more than 9,000 men are engaged.

(ii) There are five main processes involved, viz. (i) silver bar of pasa making, (ii) Guchli or coarse silverwire-making, (iii) fine wire-making, (iv) flattening (badla) and twisting flattened wire, round a silk or cotton thread, (v) Betai and gilding.

(iii) Before the coarse wire is drawn, the silver in bars annealed which process is necessary for drawing fine wire. Generally speaking, all these processes are not done by any one individual firm. The firms or cottage workers do one or two processes only. The whole work is done on piece-work basis. The silver bars are drawn through steel gauge (jantri) into the wires of various gauges. Coarse wire is drawn to fine wire by drawing through ruby or diamond discs, the latter being used for very fine wires. Fine wires are flattened and twisted round the cotton or silk thread in small factories, approximating 400 in number and engaging 5,000 persons. Labour in these factories is paid monthly.

(iv) The last process of electro-plating is done in ten factories. A cheaper variety of gold thread is also produced by using the process known as Rashi gilding. There are about 50 firms engaged in this class of work. The price of gold thread varies and depends on the price of gold and the quality and fitness of the thread.

(v) The most common thread made at Benares is the 1,000 yards variety. It is estimated that 30,000 tolas of the value of Rs.60,000 on an average are made every day in Banaras and that the total value of silver wire and gold thread made at Banaras is Rs. 70,000 per day. The industry

faces considerable difficulties as the yarn of required fineness and quality is not available at present. Yarn of 100/2 and 80/2 counts is generally used. Formerly mercerized yarn was employed.

(vi) The discs used in gold thread industry were, in olden days, imported from France and some from Surat. Due to the enterprise of local man Mr. Lele, who was sent to France as a Government Technical Scholar to learn the art, the disc-making industry has been established at Benares. It may be hoped that most of the other requirements of Benares also will be met by the local produce in the near future. Mr. Lele's work is, however, handicapped at present on account of stoppage of import of diamonds and rubies from countries which were the main sources of supply.

Pottery, Porcelain and Glass

47. **Red Pottery**—(i) There is in every village a potter supplying the need of the local population. In a tropical country clay pots are the cheapest and the most suitable utensils. They keep water cool in hot weather. Clay pots are not affected by acid or alkali and thus they are safe from health point of view. For all the necessities in life clay pots are made. They are used for keeping agricultural products, for cooking vegetables and boiling milk. They are useful in the preparation of curd and for churning. Clay pots are ideal for keeping clarified and raw fresh butter. Climate does not affect and the article is kept clean in a sanitary condition. It is an ideal material for all receptacles and if broken the cost is simply insignificant. In congregations you can supply every body water-tumblers, vegetable receptacles, etc. and when it is used there is no harm in breaking them up. In a country which is poor in metal production, which has extreme climates, our ancestors wisely made use of clay as raw material for all our needs. Clay is available in every village and you can burn these pots in the open with any rubbish combustible material.

(ii) It is a pity that our fashionable people are spending money and take delight in the use of expensive Chinawares or metal vessels. The latter are very poor substitutes for clay pots. Fashion has gone so far that paper receptacles impregnated with mineral fats are being used. These are dirty substitutes and expensive too. We wish that potters should not be made to starve by our using expensive but less sanitary articles.

(iii) In other countries terracotta (clay) wares are artistically decorated and burnt with a glaze and utilized as tea-sets and other articles. In India black pottery is being used for the purpose now and they serve the purpose beautifully well.

(iv) From times immemorial lead glazes which melt low temperatures are being used on clay pots for finer articles. This glaze can be improved and other low melting glazes may be substituted for the manufacture of terracotta tea-sets and the like.

Clay Toys—(v) Beautiful life models of fruits, cobs, animals, etc. made and their manufacture can give a very good training in our schools in place of plastic clay which is rather expensive. Toys of different shapes are made and sold quite cheap. They are artificially coloured and decorated to make them attractive. These are very cheap toys for our children.

(vi) Lucknow is famous from time immemorial in the production of beautiful pictures in burnt clay. The shapes are very fascinating and artistically made. They are quite light weighted and sold very cheap. If cheap and effective packing be devised (a device which must be easy

enough as these toys are far stronger than glass) these toys can find a good market in the whole of India and abroad.

48. **Pottery and Ceramics**—(i) There is no large ceramics industry in the Province. There are cottage workers at Khurja, Chunar and Nizamabad. Khurja has been producing blue pottery known as Delhi pottery and also ornamental pottery similar to Multan pottery. This industry exists as a remnant of the Moghal period. There has been considerable improvement and manufacturers now use China clay, and sand-stone and glazes. The articles are fired in up-draught furnaces made locally. The maximum temperature is 900 degree C.

(ii) During the war the Industries Department made an attempt to organize the potters of Khurja for the production of utility articles. Government furnaces were put in 1943 and about 200 persons were trained. Improved types of furnaces have been set up and firing temperature has been raised to 1,200 degree C. and high lead glazes have been replaced by lead-free glazes. Pottery worth about Rs.1,40,000 was produced by the Government Workshop.

(iii) Chunar pottery is really ordinary clay pottery glazed with glass powder, borax and hematite. Articles are fired in direct contact with flames. Fired articles are purchased by glazers, who apply the glaze and fire again. The finish is poor, and cheap. During the war even these pots, tea-sets, cups and saucers reaped a harvest. Normally the sale is mainly at the railway stations of Chunar, Moghal Sarai, Banaras and Allahabad. Sale should properly be organized.

(iv) Nizamabad—Black pottery tea-sets, vases and numerous decorative articles are made of pond clay. The articles are made on potter's wheel. The black colour is obtained by firing the articles in closed pitchers and getting layer of soot deposited on them. Decorated pots are engraved before firing and mercury-zinc amalgam is filled in the engraved lines. The articles are made very fragile. They are merely for show and even vases cannot be used with water for flowers. Their demand is extremely limited.

49. **Glasswares and Bottle-making**—Making of bottles, small phials for scents, etc., flasks for carrying water (ganga jalis) and kachchi shishies is done in cottages, which have small furnaces. They also use block glasses or broken glaze pieces for blowing out these articles. There are about 500 of such concerns in the districts of Aligarh, Agra, Moradabad and Bijnor. The Province now gets enough of block glass from large glass factories which have developed in the Province. In fact, before the war, the United Provinces produced glassware worth one crore out of total production in India of 1.2 crores. Many of the small concerns are also blowing hollow-wares and chimneys. The introduction of scientific improvements and supply of proper type of glass at cheap rates should prove helpful to the industry.

50. **Glass Bangles**—(i) Bangle making is predominantly on cottage scale. It is concentrated in Firozabad, where a population of about 21,000 out of the total population of 40,000 is engaged in this work.

(ii) Rapid development of the glass, bangle industry dates from 1925 when the system of making bangles by rollers was introduced. "Reshmi Churi", once the monopoly of Japan and Czechoslovakia is now being produced in the United Provinces on the mass scale. Firozabad supplies 80 per cent. of the need of the country. Bangles are not merely an article of luxury. Its use is necessary particularly among Hindus according to whom banglesless arms are a sign of widowhood.

(iii) There are 67 roller bangle factories, 125 furnaces for making twisted bangles, 100 bangle-cutting workshops, 500 muffle furnaces for enamelling and decoration of bangles, 2,400 bangle-joining cottages and 1,500 dealers. The estimated annual production is 1,00,00,000 gross pairs.

(iv) Decorated bangles deserve special mention. Plain glass bangles are cut on the lines of diamond cutting and decoration is done with enamel or liquid gold. This work suffered that 8,000 lb. of liquid gold was used before the war. This work suffered heavily during the war for want of liquid gold and other materials, fuel and transport facilities. Local firms have started making liquid gold, though not quite successfully. They need help and guidance in this direction.

(v) The starting material for bangle making is block glass. It is made at Ferozabad by all roller bangle factories and five others which make only block glass. About 2,50,000 maunds of block glass were produced before the war. At present the production is not more than 60,000 maunds. Prices of block glass have increased considerably for example, of Red glass from Rs.7 to Rs.60 per maund, of China glass from Rs.25 to Rs.300, about 10 times in many other types of glass.

(vi) The industry has done wonderfully well in copying the designs of foreign make and discovering their own inexpensive methods of manufacture. The Committee was surprised to see the improvements made by the industry without any scientific aid of any kind from the Government expert.

(vii) Several improvements are badly needed. An important proposal is to supply gas to joiners who work at present with kerosene oil flame under depressing conditions, most injurious to health. In comparison to the need of industry, there is dearth of roller workers.

(viii) Block glass, including fancy glass, has to be improved and developed and its price to be brought down. Small gas plants to be supplied for joining to different factories. I do not agree for investing large amount on any one big plant for the purpose.

(ix) The industry suffered as a result of war. It was classed as a luxury industry and had to be under very low priority for assistance in the matter of transport and supply of coal and chemicals.

51. **Glass Beads**—This is a new industry introduced by the United Provinces Government. The Czechoslovakian experts were obtained and they started giving training at Banaras about five years ago. The experts have gone away; but the training class continues at Banaras. One trained Indian lady is the head of the training class. She teaches necklace making and this has encouraged production of fancy beads by the trained persons. Some of their trained men are doing well. So far 50 persons have been trained, the training class in Banaras is conducted in a room which is full of the most choking and obnoxious smoke injurious to health. Immediate steps are necessary to remove this complaint.

Agricultural Industries

52. (i) Three fourths of our population lives on agriculture which is not always a whole-time job. The cultivator requires industries connected with his vacation wherein he can work in his spare time and add something to his slender resources. In other countries there is a branch of research workers who devote their time to investigate the new industrials and commercial use for agricultural articles. But there exists no such section in the Agriculture Department in the Province. We strongly recommend that

such a research must be started. During the war number of food products were started in the country and they placed quite a large sum of money in the pocket of the contractors but the producers did not get the advantage. It was a time when the farmer could be trained in these few industries and a part of the profit would have gone to the farmers. If individual farmers could not be approached their co-operative societies could be formed with advantage. There was no sense in spending large sum of money in transporting vegetable from the interior to the cities, specially at a time when transport difficulties were in existence and to get them dehydrated through contractors. Peelings of these products and shavings would all have been utilised easily if dehydration would have been started in the interior. The Industry would have been well established for all times to come. Similarly, jams, jellies, fruit products, etc. could be manufactured in the localities where the fruits were grown. One need not say that packing of fruits at the right time is the secret of good product and that cannot be achieved in the cities. Selection of the type of fruit is also another point.

(ii) I recommend that an attempt should be made to popularise as far as possible agricultural industries amongst the cultivators and all technical help and guidance be given to associations of the cultivators to take to these industries.

53. Dairy and Ghee—(i) The most important industry of the Province is the dairy industry. On account of the difficulty of transport, people in rural areas have churn their milk into ghee. Today production of ghee is the most well-known cottage industry of the Province. The United Provinces is considered one of the best tracts for producing ghee of high quality which is exported to the important consuming markets of India. The average annual production of ghee is estimated at 20 lakhs of maunds which was valued at 8 crores of rupees during pre-war days, but during 1944-45 the price of ghee has gone up by four times.

(ii) During the pre-war period the Province used to export ghee on an average of 1,50,000 maunds but during the years 1944-45 the export was about 60,000 maunds only and over a lakh of maunds was being purchased for army requirements and sent for clarification and distribution to the Military Grading Centre at Agra. The districts of Etawah, Mainpuri (Shikohabad), Bulandshahr (Khurja) and Agra are specially noted for ghee. The Co-operative Ghee Societies, which are working in these areas, have done a lot to improve the quality and gain public confidence. Still more attention is required to be given to this important industry.

(iii) The slaughter of milch cattle during the war has given a great setback to this industry though there has been restrictions on slaughtering milch cattle and also in their export but the rules have not been very effective. If dairy industry in the country has to survive there is urgent need for the protection of milch cattle.

(iv) Adulteration is rampant in this trade and since the advent of high prices and establishment of many hydrogenated factories pure articles is hardly available. Strong control and legislation against adulteration is, therefore, absolutely essential.

54. Gur—(i) Next to ghee, gur industry occupies an important place. Gur-making is one of the ancient industries in the Province. It is carried out in villages in most cases by the cane-growers themselves, as an industry subsidiary to agriculture, or to put it more correctly as the final stage of cane-growing. It is estimated that the large sugar factories

consume only 18 per cent. of the cane grown, and khandsaries 6 to 8 per cent.; 10 per cent. is used for seed and the rest, i.e. about 65 per cent. is converted into gur. The pre-war production was estimated to be 2,000,000 tons. Firms manufacturing bullock-driven-cane-crushers hire them out to cultivators. Similarly, juice-boiling pans are obtained on hire. These are owned also by the bigger cultivators.

(ii) Gur is exported to all parts of the country and some of it is taken over by sugar refineries. Meerut, Muzaffarnagar, Sitapur and Bareilly are the principal gur markets.

(iii) Co-operative societies to supply crushers and pans on self-liquidating basis can do a lot of good to the people.

(iv) Gur is decidedly more nutritious than sugar and there has been a great demand during these days in the entire country. Provincial Government under pressure from Government of India controlled the movements of gur with the result that this valuable food material, during shortage of food grains, was callously allowed to ferment to the detriment of every body. In the mad rush to help the Sugar Factories without knowing that only a small area of gur producing villages supply cane to the factories, gur was forced to be sold cheap at the time of production and its price was realised much higher afterwards and thus the major portion of profit went in the pocket of the middlemen.

(v) Gur manufacture is the main agricultural industry of the Province with which the poor man is concerned but this industry has been very badly tackled under control.

(vi) Sugarcane crop produces the largest amount of nutrition food per acre and still it does not get a fair deal from the Government.

55. **Oil-crushing.**—(i) The village Teli is an important industrial worker of the rural areas. Almost every good village has a Teli. Bullock driven kolhus are worked by the Teli for the extraction of oil. Oil made by this method, especially mustard and til oil, is considered to be superior for edible use to machine-made oil. The production is considerable. The Industries Department introduced an improved type of wooden kolhu in villages by demonstrating its use and manufacture in selected villages. These kolhus were similar to Wardha ghanies. These kolhus require slightly bigger bullocks but the yield is better. They have been adopted in some places. If we want to save the village oil man and to provide better oilcake at the door of the consumer extraction of oil for edible purposes should be reserved to the small man and oil factories be prohibited to deal in oil extraction of edible seeds. (Plants excluded.)

(ii) If co-operative marketing be organized sufficient stocks of oil seeds may be properly maintained and pure edible oil be sold in sealed containers at reasonable rates under an Agmark. If this is done, the Province may retain its old name for edible oils which has been lost through oil mills, some of whom have been unscrupulous in adulterating other seeds which are injurious to human body.

56. **Saltpetre.**—(i) This is an important product of the Province. Till 1850, India was the only source of saltpetre. Later Chilean and German deposits were developed. The province produces this important chemical on more or less a cottage industry basis. It is recovered from saline earth deposits in villages. Crude saltpetre mixed with salt is purified and crystallised in about 33 factories mainly in Farrukhabad and Mathura Districts.

It is estimated that 90,707 maunds is produced. It is used for making nitric acid, gunpowder and fireworks and also for manure.

(ii) This is a work generally taken up in the villages in slack season. The method is very crude and require improvement. More money has to be invested and process of artificial growth of saltpetre may be introduced with advantage. So far the industry has considerably suffered on account of the excise rules made to guard against smuggling of salt. We hope with the removal of salt tax this industry will flourish.

(iii) Saltpetre is a very good manure containing 12 per cent. of nitrogen. If the Government would have patronized and organized this industry we would have supplied the deficiency in nitrogen and potassium of our soil and would have increased the yield. There are a number of handicaps in its development. The main of them are freight charges which are very high as it is booked as chemical as against sulphate of ammonia which is booked as fertiliser. I recommend that every effort be made to develop this important industry and utilising it in the country. Country is deficient in potassium salts and this must remain the cheapest source for their production.

Food Industries

57. (i) There were about 69 food industries that the Central Government patronized during the war. More than half of which could easily and with far greater advantage be started in the villages. The cost of production would have been far cheaper and the control would have been better if co-operative societies would have been organized.

(ii) Sweets are made every where and is a local industry. No attempt has been made to export delicacies to far higher distances. Foreign confectionaries which are less nutritious and contain only sugar and essences are becoming popular but we have not tried to devise means to place our products on commercial basis.

(iii) To produce evaporated milk, sweetened milk, invalid foods, etc. will be more profitable for the farmer and imports of these articles will cease in the country if small plants are introduced in groups of villages and proper instructions are given and farmers are organized. In Japan very small plants exist and though Japan is not a milk producing country yet it used to export evaporated and sweetened milk to other countries. It is criminal to force the farmer to produce Ghee which is the least paying articles in dairying.

(iv) There is not much to be learnt in the manufacture of jams, jellies and syrups. Within a short period of last ten years Punjab has occupied the most important place in food products though it was far behind than our province. United Provinces is famous for its fruits since long but now it is losing its position. We are only left to export, amchari, mango achar and the like, sell mango products for a long. This industry is very old and even that is not organized on a scientific basis. United Provinces which is the best mango producing province did not get its due share in the mango chutni supplied to the military during the war. Mango is a delicious fruit and though we have tried to excel in creating a confusion in number of varieties but have never concentrated in canning and exporting the same.

(v) Even dried vegetables in the sun which can find a good sale have not been tried and taken advantage of. Vinegar, though made in every village is still imported. Government has been callous in placing this important industry on a paying commercial basis.

(vi) Parched Grain—parchar (bharbhuj) is an important profession in every village. Parched grain and sattu is essential food in eastern districts of United Provinces. In other countries puffed grain is a speciality and fetches a high price. Many types of special food are prepared from parched grain.

(vii) Hand pounded rice has been recognized to be more nutritious than polished rice. Mahatma Gandhi gave sufficient impetus to this industry, but labour has become so expensive that hand-pounding will have to be mechanized. There is a very cheap machine made in Japan and worked by hand. We recommend that this machine may be introduced and the industry may not be allowed to die out.

(viii) Grinding of flour is another important industry. Though the digestive quality of coarse grinding is very well known and Mahatma Gandhiji also brought this point to the fore but still it has remained no more a paying proposition to take to hand grinding. Even in remote villages small flour mills worked by oil engines, have a brisk trade. I recommend that flour mills (kharaz) worked by bullocks be introduced in villages as it is generally done in Punjab.

(ix) Dal-splitting is also an important industry in many places. Though machinery is being introduced but still the work is mostly done by hand grinding. Its economics must be studied and localities which are centres of Dal production must be organized and comparative merits of hand and machine-splitting be studied and suitable contrivances be introduced to save the industry.

58. **Fibre Industries**—(i) Hemp fibre is practically prepared in many villages. Farmers have to use ropes and strings for many purposes and so have to grow some fibre crop.

(ii) In the Eastern Districts hemp growing for fibre is very important crop. Fibre is sometimes sold and exported and a large quantity of it is used in making string ropes and Tat-Patties. In foreign countries the method of extracting fibre has been much improved. The process of netting has been scientifically studied and cheap appliances are introduced whereby clean fibre free from dirt is produced. Processes worked in Hungary and Italy are specially recommended for adoption. So also Japan string and rope-making machines are recommended for introduction.

(iii) In Khadar areas Munj and Bhabar strings are important occupations in slack season so also mat-making. If we study the exports of Japan we are struck by the huge exports of straw-braids and matting that go out of Japan. If we study these methods and adopt them we can give suitable employment to our people.

(iv) Mundhas (straw seats) are made in different localities and they are useful articles. They, however, find a local sale as their transport occupies more space and makes them expensive. It seems to be desirable that better designs and colour display may be introduced and methods of turning them into folding seats may be introduced.

59. **Tobacco Industries**—(i) In the United Provinces this is quite an important industry. Tobacco is an important crop and new varieties of Virginia tobacco have recently been introduced.

(ii) Tobacco is used both for smoking and for chewing purposes. Smoking tobacco is made everywhere and gives employment to some people in the Province. Ordinary chewing tobacco is also made in many localities and is famous for its delicate taste. Quite expensive perfumed extracts

of tobacco are made in many localities and they are sold at very fancy prices. People take this type of tobacco with betel leaves. Lucknow is specially noted in these preparations. It has a good brisk sale both in the Province and outside.

(iii) Bidi is made in most of the cities and is poor man's cigarette. Leaves in which tobacco is wrapped are found in some forests of the United Provinces, but mostly these leaves are imported from Central Provinces. Leaves of other trees have also been tried with success. There seems to be the necessity of studying the flavour of Bidi tobacco so that Bidi may replace the foreign expensive cigarettes.

60. **Perfumery**—(i) Growing of roses for perfumery is followed in many villages in Aligarh District. Perfumers from long distances come to these villages and prepare their rose water and other products. So also is Khas collected and Khas oil and essence is prepared.

(ii) On account of cut-throat competition and want of scientific knowledge this industry is dying out though there is a great demand for a genuine article. If steps are taken to organize the growers and producing their own perfumes and essences, many mouths can easily be fed and India which had name for her products all over the world will regain its lost place. Scrupulous control of products and some type of guarantee for export have to be introduced to develop this trade.

61. **Honey**—(i) In Jhansi and other eastern hill districts there is a good production of honey. Bee keeping is not scientifically followed yet there is much demand for good genuine honey. The main reason seems to be the want of proper and sanitary organization and advertisement for the product. It is easy to develop this industry on a scientific and up-to-date method. It seems to be necessary that the breeds, the product, and habit of bee be studied in all their details and simple inexpensive methods be evolved. Regular schools should be run to give education and training in these methods and use of new appliances. We recommend that bee keeping may be subject in basic training in these localities and sale should be organized on co-operative basis.

Chemical Industries

62. (i) The development of chemical industries has unfortunately been markedly disappointing and has not at all been commensurate with the size and requirements of the Province. There is a popular misconception that these days of scientific and industrial development there is no place for small scale industries specially in regard to the manufacture of chemicals and drugs.

(ii) The Committee has received on this subject a very interesting note from Dr. Krishna Gopal Mathur, D.Sc., F.I.C. Chief Research Chemist to Delhi Cloth and General Mills Company, Limited, Delhi. Dr. Mathur, who has conducted a survey of chemical industries lately, maintains that there has been an extensive development of small-scale chemical industries in highly industrialized countries like Japan, Britain and Germany. Dr. Mathur has published a book in which he gives a list of 80 firms registered in 1945 in Great Britain for starting complicated chemical industries, each with a modest capital of £100 or even less. He is definitely of the opinion that small-scale industries 'can easily be organized and efficiently run with a bare capital of 10 to 20,000 rupees and with labour about 20 to 30 men depending on the nature of the industry.' Dr. Mathur adds "a survey of the various types of chemical industries was recently conducted by me with

a view to select such industries as can be set up on small scale with least possible difficulties. A study on the lines has led me to the conclusion that if a selection is made of such industries which do not depend on coal or technique in high temperature work, power or steam or machinery that selection will represent the type most suited for development on small scale till the position of services like steam power and electricity remain in our towns and villages as it exists at present." Chemical industries like synthetic resins, and plastics, a large number of pigments, starch and dexytrines, absorbants like active carbons and active earths, valuable organic preparations for zinc and lead, disinfectants and perfumes and drugs from Indian plants, do not require much technical processing and in most of these instance are simply confined to such simple operation of mixing, heating solutions precipitating or washing or dyeing. These industries are bound to be seized with avidity by enterprising members of the public, if proper facilities and encouragement are given to them by Government. It is most unfortunate that owing to lack of support and patronage most of our indigenous chemical industries have either died out or are now in a moribund state. Dr. Mahur is definitely of the opinion that the vital needs of the chemical industry on small scale are :

(1) State control like that instituted in Japan or that recently attempted by Sir Vishwasharya in Bombay Presidency, (2) Smaller research and analytical laboratories to which a layman could apply for the solution of his difficulties, (3) grant of certain privileges specially in the matter of transport.

(iii) I entirely agree with him and recommend that a section in Harcourt Butler Technological Institute be set apart for this purpose.

63. **Borax Refining**—(i) Borax is imported into India from Tibet and refined at Ramnagar in Naini Tal District. During the last war this industry was prosperous. The price of crude borax was Rs.15 per maund. On an average 5,000 maunds of refined borax valued at 2 lakhs of rupees was made at Ramnagar at the rate of Rs.25 per maund. In the post-war days the industry suffered in competition with cheap imported borax sold at Calcutta at the rate of Rs.8 per maund.

(ii) Import of refined borax into India from foreign countries in 1938-39 amounted to 25,906 cwt. valued at Rs.2,99,222. The price of imported crude borax from Tibet had considerably fallen and was Rs.7 per maund as against Rs.15 per maund, in the last war. The total import of crude borax was 10,000 maunds valued at Rs.70,000.

(iii) During the present war, the borax industry again got an impetus. The Supply Department had orders for 25,000 cwt. of refined borax per year. The possibility of cheapening the price of refined borax made from imported Tibetan borax by refining it at suitable place need examination. The main cost is freight which is very high.

(iv) Borax is an important chemical and many industries such as glass, pottery, metals, etc. require it in appreciable quantities. Boric acid is also made from borax and is in good demand.

64. **Stationery articles**—Stationery articles like slate pencils, chalk pencils, coloured pastles, etc. are made at several places and people are making good profits out of their manufacture. Water-colours, brush work in schools are also made in tablets.

65. **Laboratory articles**—Laboratory chemicals are made by the Banaras Hindu University on a small scale. Many other people have tried to manufacture them but generally the quality is poor and production is

not reliable. Many chemicals can certainly be produced for laboratory purposes but a higher knowledge of chemistry and proper control in their manufacture is needed to stop the imports from foreign countries. The attempt is certainly worth patronage. If a sort of certification be introduced this industry may be profitable and many science graduates may earn their living with only a small investment and meagre equipment to begin with.

66. (i) **Soap**—There are about 200 small factories making soap by semi-boiled and cold processes. The production of these small factories is estimated to be 1,00,000 maunds. This industry received a setback during the war as the supply of chemicals was strictly controlled and other materials were difficult to buy. Sajji made out of reli has been largely used for making washing soap to meet local demands. There is a large scope for soap making on a small scale and it is necessary to make the rural areas also soap minded as far as washing of cloth is concerned.

(ii) Government can take help from the All-India Spinners Association, who train the village people in soap production. Good trained people with a little knowledge of chemistry may be employed to make this industry common in villages.

67. **Inks**—Inks of different types are locally manufactured. It is not so much the investment or equipment needed in this trade but it is the experience, knowledge of chemical reaction and control of reaction which is most essential to succeed.

68. (i) **Wood industry**—Furniture and general wood working furniture and other classes of woodwork are being made throughout the province, but Bareilly, Saharanpur and Nagina have specialised in certain branches. Bareilly is well known for manufacture of domestic, school and office furniture, while Saharanpur and Nagina deal more in carved articles.

(ii) The orders from the Defence department considerably helped the wood industry as a whole. Huge orders for furniture, beds, tent pegs, shelves, stretchers and building fittings were placed by the Defence Department with firms at Bareilly, Delira Dun and Moradabad, Lucknow and other places. New saw mills were started to meet the demand of Military supplies. Full details of the orders received and articles made in various centres of manufacture are unfortunately not available, but the following few figures should indicate the expansion of the industry. Output at Bareilly during the war is estimated at approximately 10 lakhs of rupees.

(iii) In order to stabilise the gains it seems to be desirable that new lines in furniture may be taken and full use of material like ply-wood, plastic material, etc. should be taken. A language of trade with a guarantee of quality be maintained to avoid any deterioration in peace time.

69. (i) **Wood carving**—Saharanpur is noted for wood carving and inlay (brass) industry. Partition screens, tables, cigarette and cigar boxes, trays, peg-tables, etc. are the main articles made. Europe and America were among their prominent markets. On an average 200 people were engaged in the industry and the yearly production was estimated at Rs.80,000 in value in pre-war days as against 300 men producing 1½ lakhs in value at present. Use of well seasoned timber and improvement of design will considerably help the industry to keep up its tradition and importance. We hope our export in these articles will revive but in order to keep up position our standard of goods must be kept up and the language of the market be created.

70. (i) **Wooden toys**—A new industry for the manufacture of wooden toys considerably developed during these days. Much of this success is due

to absence of imported toys in the market. The chief centres are Bareilly, Dehra Dun, Meerut and Lucknow. There are five concerns at Dehra Dun, one of which engaged in the manufacture of models of aeroplanes, tanks, and armoured cars for the Defence Department. Recently, a new factory has been stated at Lucknow for the manufacture of Kindergarten, Montessori and other educational toys for schools and the Red Cross.

(ii) Carts, motor cars, guns, tanks, aeroplanes, doll houses, animals on wheels, etc. are generally made. Soran, Deodar, Mango and Tun are the main timbers used.

(iii) The monthly production is estimated at Rs.22,000, Dehra Dun having the biggest share of Rs.17,000 and Lucknow Rs.2,500 leaving the balance of Rs.2,500 for other places.

(iv) The industry needs to be reorganized and some small machines introduced with a view to cheapening the cost which alone will help the industry to compete in the post-war period with imported articles. Attractive and new designs cheap and bright paints, will have to be evolved. Crude articles so far made are not likely to survive for long.

71. (i) **Lacquard of Banaras**—Soft white wood obtained in the forests of Mirzapur, is the main source of wood. The shapes are first produced on the lathe and then lacquaring is done. This is an old industry.

(ii) Another important item is box of toys and utensils for babies. The bulk of the work is done at Amroha. The main market is Benaras. Round about Banaras also this work is done. There is a good sale of these but as in the case of wooden toys, there is urgent need of organization and improvement of this industry also, if it has to stand in the market, in open competition.

72. **Lacquard wood of Amroha, Lucknow and Agra**—Lathe worked legs of beds with lacquarding work is done in these places. A motely effect is created by a very ingenuous process. These workers also produce fancy insect boxes, bowls, lamp-stands, etc. The production of these articles has been copied from the Punjab and encouraged by the Government U. P. Handicrafts.

73. (i) **Manufacture of bullock-carts, big boxes, etc.**—The production of these articles of rural industries is seen in many villages especially in the Western U. P. Rath or artistic chariot is made besides ordinary bullock carts. Cots made at Jajibabad, Hapur and Tilhar are famous. Boxes are made in many places in the western districts of the U. P. Village carpenters are engaged in such type of work.

(ii) The best method of their marketing is to bring them to village and district fairs and exhibitions which are held in almost all districts of the western Dealers also take these articles to Kartiki Fair and Sonapur Mela.

74. **Miscellaneous Industries Katha**—Katha and Cutch industry is very important in the districts of Lakhimpur, Gonda, Bahraich, Bareilly, and Pilibhit. In spite of synthetic dyes and chemicals, the importance of Katha manufacture has not diminished. There is one up-to-date factory working at Bareilly but generally Katha is made on a cottage scale, in the forests where trees abound. The method of production is quite simple. Wood is chopped into small pieces and boiled with water in big iron pans. When a thick decoction is made it is dried in the open. It is used both for eating with pan and also as drug. It produces good dye and was in great demand during the war. We are not aware if any improvement in the process has been made through Government help. The crude method can certainly be

made more economical, better article can be prepared by a little chemical control and the importance of this substance in dye can be utilised to the advantage of everybody. We wish that the industry may not be neglected else we are afraid the industry will soon disappear and will pass into the hands of the capitalist who can afford to make better product by employing up-to-date methods of extraction.

75. (i) **Hand-made Paper**—Hand-made paper was an old flourishing industry in the province. Large quantity of paper was made in Mathura and Kalpi. The latter place has still preserved the art of paper making and gives an employment to a few workers. Mahatma Gandhi gave a great impetus to this village industry. Though the paper made by this method is thick, crude and expensive yet it has been rightly patronized by the Congress Government. During the war there was a great opportunity for developing this industry but that opportunity has been callously lost. During the war the factories were not able to supply the need of the Government and civil population was simply starved. Every Government ought to have encouraged this useful art in these days but negligently little was done.

(ii) In Japan hand-made paper is made on a very large scale and everybody used this paper for writing in their own language. This is why the industry has survived and the workers get a handsome wage.

(iii) Paper is made now from old paper mixed with a small quantity of pulp made from hemp, cotton and other available cellulose material. In Japan there exists a special school for teaching hand-made paper production. The teachers with the help of scientific people have studied all the details of paper making and have produced small equipment which can be purchased by the ordinary man and utilized. A little description may not be out of place here.

(iv) Paper material which is generally used is the bark of a wild growing plant. It is boiled in caustic soda or with Sajji and lime for a certain period so that the articles may now easily be transformed into paper pulp. Receipt for the chemical employed and the quantity of raw material taken and the size of the utensils in which paper pulp has to be prepared are all worked out in detail. Even the quantity of fuel needed is well known. Economical furnace for burning is no exception for details.

(v) After boiling, the pulp is placed in a small heater worked by a small motor. This heater produces the pulp very efficiently and in a very short period. When pulp is ready paper is taken out on the deckles made generally of thin bamboo strips. These deckles can easily take a sheet of paper 20" by 30" at a time. When these papers are drenched in felt they are pasted to an iron sheet in which fire is kept burning with ordinary rubbish and paper can be taken out after a few minutes. Men working on the preparation of paper are separate from those who paste, and take away the paper and finish them. This paper is sufficiently thin, cream coloured and strong enough.

(vi) There is no reason as to why we cannot improve our expensive method and can prepare paper on a small scale. Till the time we evolve methods of easy working we can import these small tools from China or Japan. In order to help the industry we can prohibit certain types of paper being used exclusively from hand-made papers. Finishing of paper may be improved and labour involving method of pounding paper pulp may be done away with.

(vii) Certain types of papers which are not in much demand and whose manufacture can never be taken up by the Factories, may well be tried by

the hand-made paper workers. Of course, all this will require a detailed investigation and the process will have to be perfected in all its details.

(viii) The work so far done is neither systematic nor enough.

76. **Brush ware.**—Brush making is the oldest industry of Meerut. Now it has spread to Agra and Kanpur and Meerut has lagged behind. Cloth brushes and hair brushes are mostly made. Brooms and brushes for removing cob-webs are very common. The raw material used is horse and cow tail hair, bristles and fibres such as Mexican fibres. Palmrya and cocoa and rice root fibres are also used. The wood used is mostly Faresh, Eakain, Haldu, Tun and Teak which are available locally. Sorting of hairs or fibre making of handles, drilling of brush backs, insertion of fibres and bristling all is done by hand. Unfortunately the statistics of production by the cottage workers is not available. The cottage workers are fairly clever in their work but are not organized.

77. **Fountain pen industry.**—One of the important industries which has recently developed is the fountain pen making industry. One Mr. Hirday Narain of Lucknow was the first man to undertake the manufacture of pens and pen nibs. Dayal Bagh was the next institution which manufactured complete fountain pens. The Goel Fountain pen works at Kanpur has done considerable work in the manufacture of gold nibs. The factory has set up improvised machines of its own for nibs and other parts of fountain pens. This is indeed creditable achievement. The factory claims to have produced all parts except the rubber tubes. During the war there was a great set back in the manufacture of pens. The quantity of production of pens and pen nibs, unfortunately is not available. With the growth of literacy in the province this industry bids to be one of outstanding importance and deserving of all support and encouragement from Government.

78. The above is in no way a complete survey of the industries practised at present in the province but we have tried to give the most important ones.

CHAPTER III

Effect of War

79. We tried to get information about the supplies of different articles to the Supply Department so that we could assess more definitely the effect of war and gains made therein. To our misfortune that information was not made available to us. I recommend to the Provincial Government to obtain that information from the Government of India for further reference. Such an information will be of very great economic value to evaluate the potentialities of our workers and our natural resources.

80. (i) The present war was different from the war of 1914. In the previous war consumer goods were available in the country and they could be imported easily while in the present war, India was cut off from all the countries of the world and people were not only deprived of their necessities which they used to import from outside, but the country was forced to produce articles for the use of the military in field and maintained on the borders of India. This naturally resulted in exposing the weakness of the country in the most naked form. Prices shot up very high and nobody looked to the crudeness and quality of the article made but every thing and anything could be easily sold. Many articles required for the

Military had to be manufactured for the first time in India and the raw material available, skill necessary for it and the training needed and also the equipment required all had to be collected and evolved. This necessitated the sympathetic attitude of the Government. Indian workers and manufacturer were approached to manufacture new articles and they were given all the details of manufacture. People were, therefore, trained in entirely new processes and every ingenuity was paid for at a far higher scale than was contemplated by the workers themselves. Chemicals which were unknown and unused had to be manufactured, contrivances and machines had to be made though in the crudest possible form. Division of labour had to be carried out practically in every small workshop and work had to be entrusted according to the capacity and wages of the worker. Professors of Universities who never took part in commercial concerns were imported and their experience and knowledge was utilised for the manufacture of number of articles for the first time. They themselves realised as to what advantage their researches, knowledge and experience can be applied and in what way it could be turned into gold.

(ii) It is unfortunate that a complete record of what was supplied by the cottage worker to the Supply Department has not been made available but with what little we know we can safely assert that the scope of cottage industries were very much extended and most of the people were kept busy in most of the industries. The workmen who never cared for the standardization of their goods were forced to manufacture articles of certain grades and they were given necessary training to keep to specifications given to them. Ingenuity and knowledge for substitutes was well utilised and the skill in the manufacture of new articles was well exhibited and encouraged. For the first time it was proved beyond doubt that when a market is assured the articles can be manufactured in large quantities and they can be made to conform to standards desired by the market.

81. (i) Wars have come and gone but Indian industry took very little advantage as in all of them imports from foreign countries were not effected. There was some general prosperity inasmuch as prices were high and the labour was secure but nothing more than this had happened. But it was different in this war.

(ii) Wars are always the producers of wealth specially in those countries which are away from the scene of action. They are God sent opportunities for the development of new industries. If a country is independent and is helped by a National Government it can establish thousands of industries on a sound footing. One must study the Industrial history of Japan from 1914 to 1924. Japan which was unknown in the world could compete practically with every country in 1924. It could undersell in their markets every type of consumer's goods after the last war. All countries had to build strong tariff walls to stop dumping of Japanese goods. To avoid an awakening in India cheap goods were wrongly declared to be result of sweated labour and cheap money. Whatever may be the explanation but the fact must be admitted that during the short period of ten years Japan could transform itself into an industrial country. It could overnight produce the cheapest goods in the world and it must be remembered that Japan had no mineral or natural resources to her credit and had to depend for the same on other countries. Japan knew her opportunity and made full use of it.

(iii) During the war of 1914-19 India too was not a scene of battle, had a vast country full of natural resources and facilities and had a large

population and cheap labour yet she was not destined to advance industrially. Her masters did not like to help her and she could not improve.

82. During the present war, however, in their own interest the Indian Government helped the industry though only towards the end of war and only those industries which were absolutely essential for military needs and whose goods could not be imported easily, were assisted. We can gain a lot from this opportunity, provided we make full use of it now and do not slacken our pace. If we wait for capital goods, we must be sure we shall be entirely defeated. Before we can secure the supplies of our plants, consumer goods from foreign countries will flood the market, and we shall not be able to compete by overcapitalised factories. If we want to consolidate our position we must make out our own small contrivances and make use of the available skill, utilize foreign experts on payment and develop the cottage and small scale industries.

83. The first and the foremost lesson that the war taught us was that all factories working in India depended upon foreign countries even in the supply of small parts to replace worn out ones. In spite of the fact that textile industry was over hundred years old it had to depend for the machinery on England. It cannot extend itself or replenish the old machinery without foreign favour and help. The same was the case with other big industries. Dependence even for small things on others is simply disgraceful and inexcusable. It is regretted that the lesson is not learnt even today.

84. (i) On the other hand small man was not dependent on foreign countries and he could multiply his tools and equipment in his own locality and could make full use of his resourcefulness. We wish that the industrialists in India must be wiser now and the Government should insist that machinery and plants be manufactured in India as early as possible and the crave for imported machinery must cease.

(ii) To manufacture heavy and highly complicated machinery may not be easy but certainly small machines and tools contrived by another oriental nation—Japanese—during and after the last war may not be difficult to copy. We must imitate this small Island in this connection and make full use of the ways and means that they adopted. If Japanese could succeed with the small machines and contrivances of their own make, in underselling the mass production countries, India can do the same.

85. (i) The second lesson learned is that all these industries which depended upon foreign countries for their raw material suffered very badly. All such raw material should now be produced or raised up in the country. The most suffered industry in this respect was textile. Rayons, Staple fibre, silk, woollen yarn were no more available and the looms depending upon them had to suffer or had to switch over upon some other yarn available in the country. If in future artificial yarns have to be used in India, the Government or the people must establish factories to supply these new fibres else the whole scheme of textile must be revised and re-organized according to the materials available in the country. If India wants to use beautiful cloth made from synthetic yarn it must produce it. It is a disgrace to clothe ourselves with something which we do not produce ourselves. All the raw material necessary for the production of synthetic yarn of old or new origin is available in the country and there is no reason as to why factories manufacturing these articles cannot be established with advantage. As far as natural fibres like

silk and wool are concerned, we must certainly produce the former and also utilize the latter. Our industrialists should know that we cannot for very long depend upon the natural fibres. Synthetic fibres will have to be produced in the country.

(ii) Besides yarn as raw materials, colour and chemical there are other articles whose absence was felt very much. Some of these were substituted, some were made and others were purchased at any price at which they were available. Many industries suffered from the absence of these articles. It must now be systematically studied as to what India does not produce and every attempt should be made to make India soon self-sufficient. Even if we have to produce articles at higher cost we shall have to produce them in preference to cheap articles from abroad. No country is safe which is not self-sufficient in the matter of articles which are the essential needs of the people or those of the industries. By such a detailed study, we are sure we shall find that thousands of these things can be easily made in cottage industries or on small scale just as many new things were produced during the war.

86. The third thing that we have noted is that most of the big industries suffered from the absence of coal. In any future organization of the country, therefore, we shall have to use more of electricity than coal and will have to economise our existing resources. If we employ human and bullock power as energy we shall be helping the country to the great extent.

87. (i) Leaving the above theoretical experiences of great value there are number of other definite gains which must be made note of for the use of our future development.

(ii) We consider the following definite gains which stand in bold relief and can help in our future programme :

(1) With proper guidance and control standard goods can be prepared according to specification by our cottage workers. They are neither conservative nor stupid but if they are once convinced of the utility of a certain method they will at once take to it. They will take full use of any instruction given to them by those in whom they confide.

(2) They have learnt and adopted the principle of division of labour on a far higher scale than hitherto. This principle was already in practice in bangle making and other industries requiring several stages of work. During the war it was adopted in shoe, chappal making and other industries.

(3) If market is assured and workmen are supplied with the proper raw material they can make much more quantities of articles than they generally do. They will easily adopt any labour to spare they will rightly shun the use of a labour saving equipment.

(4) They have ingenuity, dexterity, vitality and patience that the production of new articles requires. If there is a margin in the making of a new article they will gladly spend their time in making a new experiment for evolving a new process. Though they are neither chemists nor mechanics but they always display originality if they are given a chance of showing the stone. We have seen all these qualities displayed in the manufacture of many new articles. In Kanpur there are many small establishments making shoe nails and bicycle parts by quite ingenious methods and with inexpensive tools. Galvanising, a chemical process, is being dexterously done on a small scale in quite a simple way. Many

instances may be multiplied to show that our workers are very intelligent and resourceful and they require guidance and organization.

88. All the above gains were the result of an emergency that was created beyond our control but if we organize our society on the basis of post-war reconstruction we can create circumstances under which all these things may be repeated and made use of for our future benefit. The first thing, therefore, is to organize our workers into such a way that they may be supplied with the necessary and proper type of raw material and asked to prepare goods according to certain standards after which they may be relieved of the marketing of their goods. If supply of raw material and marketing of goods be left to some other agency, Government or public which works on a sole basis of helping the worker and not for exploiting them, half of the battle will be won. Just as a factory owner is convinced that there must be market for his goods and keeping that confidence and faith, he produces goods en masse similarly, there seems to be no reason as to why a cottage worker cannot be made to do so. Of course, the factory organizer takes the responsibility of the supply of raw material needed for his factory and he also makes necessary arrangements for the marketing of these goods. The labour employed in his factory has only to perform a certain part of the function. The labour gets the wages all right but has nothing to do with profit and loss of the factory. The responsibility of the result of business entirely lies on the management and supervising staff. If a similar organization is made of the cottage workers, with the only difference that all profits may go back to them the workers can produce goods perhaps far cheaper and more attractive and useful. We saw in Banaras that the workers lose their valuable time in selling their goods and generally they have to sell at the prices which the dealers decide to pay. In such an unequal bargain he loses both his time and money. If Karkhanadars of cottage industries after paying certain fixed wages to their workers make money in the sale of goods why cannot a similar organization succeed which aims at the betterment of the workers.

89. In Japan this principle was recognized even for big industries. Banks used to purchase cotton in India on their own accounts and took cotton to the spinning mills, paid them fixed wages for spinning certain counts, when the yarn was ready it was handed over to the weaving mills where a certain standard of goods were prepared on the basis of pre-fixed charges. This woollen cloth was again taken to the finishing factories where it was made in a saleable form. Then the bank took the same and sold it in the foreign market. The profit so made after paying interest charges of bank and other expenses, the entire profit used to be divided amongst the different workers, the spinners, weavers and finishers. In this way the workers were assured of their wages and were relieved of the finances. The capital was thus made available at the cheapest rates, raw material was purchased through the best trained staff and the goods were sold by the best selling organizations. If Japan could organize such a useful system we can certainly make a start and try the same scheme in one or two industries to begin with. We can extend our activities in the light of the experience gained. Workman who is thus assured of employment will certainly be willing to accept a lower rate to begin with as he will be sure to get more when goods are disposed of. Now he worked hardly for five days in a week and utilises two days for selling his goods. He has to pay much higher rate for the raw material and has to sell at a low price. When the Industries Department could succeed in supplying finished goods

to the Military through workers to whom raw material was supplied, why the same scheme will not work in normal days? We must have the same urge as we had during the war. Of course, in this case the Department will have to study the market, the raw material and the standard of goods to be made. But this is not at all a difficult matter. We shall give more details under another chapter, and leave the matter here only at this.

90. (i) The other thing that we would like to mention is the value of research for the cottage worker. Research may be in a process or in chemicals or in the designing of a machine or in the design itself but the cottage industries can only improve if the worker is provided with the up-to-date knowledge available in the world. There must be an organization wherefrom should flow new ideas every now and then and the lively interest of the workers be maintained. Cottage worker is not a conservative as he is generally painted, but he can be made to take a lively interest in the manufacture of a new article and he will do so provided he is given the necessary encouragement and guidance. While at Ferozabad we were introduced to an ordinary old mistry who had designed most of the tools for the manufacture of new type of bangles. It clearly shows that left to themselves the workman is not conservative and is willing to grasp every opportunity to manufacture a new article which is presented to him. He will certainly take several times more interest if there is an organization to help him in this task.

(ii) In Japan there is a regular batch of people employed for this purpose. Their duty is to get a new article from abroad and analyse the same and then find out the best and cheapest method by which it can be manufactured. They study in all its detail both the raw material and the process. When they are convinced that certain method will work they will take the workmen into confidence and get a few samples made. When these samples are approved and find a regular market, classes of workmen are held to impart the necessary training. In this way every day a new article is manufactured and sent in the world market giving employment and the necessary skill to the Japanese workers. We wish a similar organization be set up in the Province for the purpose.

CHAPTER IV

Problems and their Remedies

91. (i) Before we discuss the steps necessary to place the cottage and small scale industries on sound footing we must consider the general handicaps with which they are confronted. During the survey of different industries we have tried to indicate some problems for individual industries but the difficulties are common and require a common treatment.

(ii) The main problems are as follows :

- (1) Supply of adequate raw material of good quality at reasonable prices.
- (2) Supply of finance.
- (3) Technical improvements.
- (4) Designs and standardization.
- (5) Marketing, distribution, advertisement and exploration of markets.
- (6) Taxation and transport.
- (7) Difficulties in finishing.
- (8) Supply of power.

92. (i) **Supply of raw material**—For the consideration of this difficulties industries may be divided into two types (a) those which require natural raw material and (b) those which take partly processed articles. In the first category are included industries like oil-crushing, katha making, utensils, etc. Small man cannot afford to purchase in the best and the cheapest market. He can neither afford to purchase large stocks at a time, and thus get them at reasonable prices, nor he can insist upon quality as he generally buys on credit. Large quantities of oil-seeds, for example, are purchased by the oil mills at the time of harvest and only second or third rate seeds are available for the village oilman. The shop-keeper has no scruple to mix dirt, rubbish and other oil-seeds. At the time of harvest generally the prices are cheap and afterwards go high. So he has to pay more, first on this account and secondly, he purchases adulterated article, and thirdly, he has to pay the price which the shop-keeper demands as he does not purchase against cash. This is not all. The rate of interest is exorbitantly high and the illiteracy of the worker is exploited to the extreme in accounts. When quality sold to him is not good he cannot produce a good article and when price paid for raw material is high he cannot sell cheap. To add to his misfortune the shop-keeper generally insists that the article prepared from the raw material advanced must be sold to him and at his prices.

(ii) In the case of partly processed raw material such as yarn and leather, there are many more difficulties. There are number of middlemen between the mills and the supplier of yarn to the weaver and every one of them must have his profit calculated at sufficiently high rate. Every one must charge his expenses like transport, brokerage interest, house rent, insurance, etc. Factories refuse to supply direct to the weaver even if he becomes a member of the co-operative society. Then again he tries his best to take to malpractices already enumerated. After all weaver is a rival to the spinning mills and he must be crushed in the bargain. There is no protection given by the Government in forcing the mills to sell their yarn at the cost price with a reasonable profit.

(iii) Competition between factories and small man is both unfair and undesirable. Laws will have to protect the small man and societies have to be formed of cottage workers so that they may give an equal fight to some extent.

(iv) Supply of raw material therefore, is an important matter and more finance is not the remedy. We have to arrange for the regular supply of raw material of good quality and at reasonable prices. For this only a co-operative society will not do but in certain cases (as in yarn and leather) Government will have to force factories to give a fair deal to the workers and have further to enact stringent laws to stop mal-practices and adulteration. Mills have to be forced to set apart a certain minimum proportion of their products at a reasonable rate.

(v) In the case of imported raw material there is another difficulty. Whenever a case of protection is made out by the mills, the position of the small man is left out of the picture. If foreign yarn is discouraged to be imported and custom duty is levied for the protection of the mills, nobody considers that such a procedure makes the position of the weaver precarious as it makes the raw material of the small man more expensive. Along with such a measure some subsidy, rebate or the supply of yarn from mills at cheap rates or the like must be provided for the small man without which the Government simply sends the small man to the wall.

(vi) To add to this, during the war, he suffered from inadequacy of raw material and it was only available at exorbitant prices in the black market.

As I have already pointed out many new establishments, known as hand-loom factories have been started and he has been forced to work only as labourer.

(vii) The position, therefore, is very serious and has to be remedied.

95. (i) **Supply of finance**—Finance is that most essential requirement of a business. To buy his material, to market his produce, to procure equipment, to wait for good prices in sale of goods, to allow credit to his customers, for all operations an artisan needs capital. For all these needs he has to depend upon his money-lender, who always charges high rate of interest and sometimes combines his business of money-lending with that of the supplier of raw material and sale of finished goods. The cottage worker loses in every respect. Not only the money-lender, who is also a shop-keeper tries to cut down the prices of finished goods to the minimum and thus forces the workers to produce articles of a lower grade but at cheap prices. The shop-keeper does not understand that by doing so he is killing the hen which lays golden eggs. Many industries have disappeared on account of the unscrupulous working of the shop-keeper.

(ii) Credit societies were formed, which helped him but unfortunately, their rates of interest were also high and they created all the difficulties that an easy supply of capital always involves. The aim of the Co-operative society should not have been to supply credit indiscriminately, but only for productive purposes.

(iii) The Reserve Bank can come to the rescue of the Province. The Argentine Bank and the Bank of Brazil have "Industries Department" of their own. In 1945, a new Department called the "Industries Finance Department" has been added to the Commonwealth Bank of Austria, to grant loans for cottage industries and for housing construction at low rates of interest. The working of these Departments should be examined to see how far the Reserve Bank of India will be in a position to extend such help to cottage industries in this Province. Perhaps it may not be possible for the Reserve Bank to deal directly with organisers of cottage industries but a Co-operative Apex Bank may serve as medium and help industries directly. The Reserve Bank granted a rebate of $1\frac{1}{2}$ per cent. to the United Provinces Co-operative Bank initially for one year and a similar or higher rebate can be granted by the Reserve Bank so that cheap finance may be provided to the cottage industries.

(iv) The main difficulty both in marketing and finance has been the method of accounting. The rigidity of the Finance Department creates delays and loses flexibility which forces the debtor again to go to the money-lender. If the rigidity in accounts be made flexible better services will be available to the cottage workers. Articles which are soiled, spoiled or suffer in transit or through old age or by any other cause of this nature must be disposed off as soon as possible to avoid losses. Red Tape and reluctance of every small matter or interference by the Finance Department should be avoided. The possibility of creating an independent organization to deal with all financial aids, etc. may be studied and the Government may give grants or loans to this body so that the observance of financial regulations and rules may be easily avoided.

(v) To begin with Rs.5 crores be provided for the development of industries spread over a period of five years. One crore for the supply of small machines their imports and manufacture, a crore for the organizations of sale and purchase, one crore for technical help, literature and museums and two crores for organization, services and miscellaneous.

94. (i) **Technical Improvements**—It must be admitted that in the present day world where all resources of chemistry and engineering are available to the manufacturer, we have to find out some method by which new uses of raw materials and new processes are made known to the cottage worker. The knowledge and the skill has to be acquired before he can stand on his own legs. The worker is generally illiterate, and even if he be literate, his education is hardly enough to allow him to study scientific literature available on the point. To keep oneself in touch with up-to-date improvements in different processes of industries is not an easy job even for experts. There has grown so much literature round about every industry that it requires a special training even to collect such a material at one place and utilize it for the industry with advantage. This work can only be done by some public agency. It is unfortunate that in the first place there are no such Research Institutes in the country, and whatever little exists no body cares for the cottage workers.

(ii) It is entirely incorrect to say that cottage worker always tries to follow the same method which his forefathers followed and is conservative both in learning and adopting a new process, however, useful it may be. As I have already pointed out in discussing individual industries I do not share this view. I am sorry to differ from my colleagues in this respect. If he is found conservative in certain circumstances it is due to the fact that the poor man cannot afford the new experiment, but whenever the advantages of the process are shown and he is convinced of their utility he is seldom averse to take it. I am constrained to say that so called experts know very little the real position of an industry nor they know the difficulties under which the cottage worker is doing his job. Secondly, they know very little details of an industry, not being connected with the industry themselves and their knowledge being old by decades. Thirdly, the experts do not condescend to mix with the worker and speak his language. Nor they try to create confidence in him so that he may consider the experts as his real benefactor. Wherever that has been done, results have always been wonderful. When during the war workers were found to be willing to take to new methods and prepare articles according to the prescribed standard, how can we dub them now as conservatives. The time has come we should leave these set phrases for good and we must see that technical knowledge of the cottage worker improves.

(iii) I am convinced that a lot can be done to develop cottage industries by imparting proper type of technical education. It must be the work of the State to provide this essential need.

95. (i) As already pointed out, the rush of the middlemen to give as little as possible to worker; with every new piece to fleece him of some small income that he makes, gives no time for the workmen to improve his designs or to produce a better article. It is not his unwillingness to conform to a certain standard but it is more due to the fact that he simply cannot produce a certain standard of goods at the proposed price. If the cheapness of the articles is desired by the public or by the middlemen there are other methods than deterioration in the standard. It must be admitted that the workmen does not go about and study the up-to-date demands of his customers. Though he generally comes in direct contact with the people and sometimes he is asked to prepare a new article by the customer himself, but such opportunities are rare. In other countries, travellers are sent out both in the internal and the external markets and the requirements of the people are minutely studied. New fashions are evolved and the changes in the finished articles are accordingly made. It is this

class of people which really helps in bringing about new designs and standards. Of course, there are people whose main job is to think out a new design. Such men are always paid by the industry, or by the public. I was really surprised to find in Banaras that there does exist a class of people who not only give new designs to the weavers but prepare details as to how such a new design can be executed. Of course, their knowledge of the world is meagre but they are performing this duty according to their light admirably well. We do require some sort of training to widen their outlook and to make them more useful. I have, therefore, proposed in "Organization" an arrangement to make up this deficiency.

(ii) I admit that for the development of any industry a certain standard has to be evolved. In foreign countries even in the case of fruits, which are a natural product, a standard has been created and a language of the market has been discovered. The question of standard may not be of very great value if the article produced is required for local consumption, as the customer can see to himself and pick and chose, but in the case of an article exported outside the locality, a language of the market has to be evolved and followed.

96. (i) **Marketing, distribution, advertisement and exploration of the market**—Cottage workers are poor and produce number of fine articles that could be easily sold not only in different big cities of the country but also at very attractive prices in the foreign market. Every thing which is made will continue to be manufactured if there is a demand for it. In this world of advertisement we cannot depend upon natural demand. We have to create customers and bring to their notices every new article made. The advantages and economics in the use of such an article have to be advertised. Proper propaganda has to be made without which even the best article does not fetch a good price. Useless stuff can be sold by propaganda while attractive articles remain unsold without it. To expect all this from the workmen, who is busy in the preparation of the article, is not desirable nor practical. The workers are always ill-suited for a job. workers have realised this difficulty themselves and they select some of them to work as their salesmen, but they also are unsuitable for the task. Besides the system can work only for the local sales. When sales are taken by the shop-keepers who unfortunately follow the course described above, the industry itself comes to ruin gradually but surely. Work of the Government in starting the Emporium for this purpose must be appreciated. I am convinced that we have not only to explore new markets in India but we have to study possibilities of export. Our Trade Commissioners as well as travellers for which we have made provision can do a lot in this respect.

(ii) Marketing, however, is the most important link in the organization without which no development is possible. We must, therefore, do the propaganda, advertisement of goods and market articles and find out new avenues of consumption.

97. (i) **Taxation and transport**—Ver, bitter but correct complaints have been made to us that the local bodies levy taxes in the shape of octroi or taxes on goods and income, in the manner which hits the small man. At some places the raw material is taxed and so also the finished goods. Local bodies must understand that it is the prosperity of the people living within their jurisdiction which is responsible for the prosperity of these Institutions and therefore they must give every encouragement for the development of different industries, both in self-interest as well as for the well being of the workers. However, the policy of taxation cannot be left to the discretion of these bodies. I recommend therefore that all taxes should be examined in detail by the Provincial Government and where

they are found to be detrimental to the development of industries, they must be abolished. Amenities of life in a Municipality or District Board must be paid for by those who enjoy them and not indirectly by those who produce goods and enrich the country. Octroi is levied in number of ways and its onerous burden is extremely high in certain cases.

(iii) Transport adds considerably to the cost of the manufacture of articles. In the case of big industries quantities of raw material or that of finished goods are taken into consideration in deciding the rate of freight by the railways, but such a concession does not exist for the cottage worker simply because he deals in small lots, though the total quantities may be for more than those used in big industries. This is quite unfair. The railways should take into consideration the total quantities delivered at a certain station and special rates should be quoted and charged wherever the total quantity are considerable. I wish that the Provincial Government should take this matter with the Railway Board at an early date.

(iii) Further the poor man has always to grease the palm of the goods clerk concerned whenever he receives a consignment from outside or sends his finished goods for sale. Thus both his raw material and finished goods become expensive. Factories pay much less than as they pay either lump-sums per month or on wagon-basis. Illegal gratification is the general complaint against goods clerk in the Railways but it works more hardly on small consignments. If the Government is unable to stop this malpractice the railways should take into account all such amounts paid and revise their freight rates accordingly. As long as this practice continues people will prefer employing careers other than railways and quite correctly so. This is now a very old complaint and must be removed.

(iv) Besides these two important items custom duties levied to protect big industries or for revenue must be considered in the light of their effect upon cottage industries.

98. **Difficulties in finishing**—There are number of articles which require good finishing before they are placed in the market. The workmen have tried to do this work in their own simple manner. The taste of the consumer however has changed and the matter has become very important. I propose, therefore, that arrangement for finishing by levying a small charge be made for articles which may improve their finish and are likely to fetch a higher price. Individual finishing is neither possible nor will pay.

99. **Supply of power**—This question is discussed in more detail under another reference.

CHAPTER V

Steps necessary to Stabilise Gains

After describing the problems of the cottage worker at one place it becomes easy for us to describe the remedies, specially when we have already given the details of individual industries and have dealt with their difficulties at those places.

100. (i) **Nationalisation of Cottage Industries**.—The foremost and most practical method that represents to me is to nationalise the cottage industries, i.e. the Government taking the entire responsibility of utilising the skilled labour and to use the workers for the production of useful commodities. The entire nation using these goods and paying for them at a

level which keeps the unemployed free of wants. Of course, the responsibility is great as it turns the Government into a business concern to that extent. But it is done even now in the case of railways. Why should the Government shirk its duty in a matter of far more importance i.e. to find employment to the lakhs of people who are simply somehow existing today. If this responsibility is not discharged the Government will have to be always in danger of such a huge population of discontented and starving millions who when combined as they must, due to common danger to all of them, will prove highly disastrous and will create chaos to any Government.

(ii) The whole world today is going towards Socialism and perhaps this is the only solution for developing poor countries. Even England today is trying to nationalise big industries. The Bank of England the oldest Central Bank of the world has been nationalised and serious steps are in favour of nationalising big industries but they are met in opposition by the "Oligarchies of our industries". Several times an objection has been raised that Government should not compete with private enterprise. The latter should be encouraged to develop on its own merits. Here is a chance for the coming National Government to prove their worth and nationalise cottage industries. Let our province take the lead and take up different industries one by one and organize them on a sound basis so that the workmen be assured of their livelihood and many earn an honest living without any worry and harassment.

(iii) It is the duty of every state to provide everybody with employment and to give him sufficient for his physical needs. In other countries doles are given to the unemployed. Insurance against unemployment is arranged and all steps are taken that life may not be a burden on humanity. Neither the Government in the Centre nor the Provinces have so far discharged this important duty. The performance of such responsibility can no more now be delayed. As soon as stocks are taken gravity of the situation will be apparent as there will be found millions of people unemployed or partially employed. According to a rough estimate 25 per cent. of the looms in the province remain unemployed. This gives no idea of the people who depend upon these looms to earn living.

(iv) Cottage and small scale industries are already established institutions. Their wares are in demand, workers in them know their job well and possess the necessary skill, the only thing required is to organize a disorganized institution. Even at present thousands of Karkhanadars who exploit these workers are reaping a good harvest of riches and wealth. If a national Government takes charge of these workers it must succeed. If the Government experts consider that improvements in the present method is possible let them have a chance of showing their mettle in nationalizing these industries. We are sure that if the work is properly handled industries will be placed on a sound basis in a short period. Even if there be some loss in the beginning, the loss is worth the trouble and the paramountcy of the task. Government can easily find the money and can lose a part of it for the betterment of people. After all State exists only for this purpose.

(v) Let a trial be made with one or two important industries say textile or leather or both and let other industries follow in the light of the experience gained. We have got experts who are said to have known their job, so the machinery for supervision is easily available. Raw material is controlled today and therefore, there is no possibility of losing money on its purchase. A sales organization in the name of Emporium does exist

and the organizers being in the market know perfectly well as to WHAT THINGS are likely to sell. It is very little that the Government will have to do. Money can be had cheap and plenty and there is still a shortage of consumer goods, specially in cloth and leather. We cannot get a better opportunity than at present to start our experiment. There are also many public spirited people who can take charge of such an enterprise. I strongly recommend, therefore, that nationalization of cottage industries be taken up at once and started. I am extremely sorry that my colleagues have not even the courtesy of examining this proposal and expressing their views.

101. **Co-operation**—If the Government do not agree to nationalise cottage industries the other method of approach will be through "Organization". How to organize these industries and how should they function is a subject of another reference and I propose to deal with it in detail at that place.

102. **Organization**—Whether we decide to nationalise the industries or to organize the workers in co-operative societies we shall have in both cases an efficient organization of the Government. This organization must be both efficient and effective. Of course, it will cost much more but without money nothing can be achieved. We propose the organization in the hope that Government means real help to these people and will give proper share of its revenue for this huge population, that exists on cottage industries.

103. (i) **Director**—The first and foremost link of the organization is the Director. He must be live-wire a pushing and enthusiastic worker imbued with spirit of service and knowing the commercial consequences of his actions. Upon his will depend the success of the organization.

(ii) So far anybody was considered to be competent to do this job. Either an Indian Civil Service or any executive officer was considered to be suitable for his type work. He was brought there to administer as if the workers were his subordinates and cannot but obey. Director, himself, not knowing his job created a net work of files, which in turn wanted clerks. Things multiplied in this way and some money was shown to have been spent on cottage industries. There were technical institutes to consider him the *persona grata* and there was a small sum at his disposal for distribution amongst the workers. This grant was to be distributed amongst the largest number of workers so that the recipients may remain loyal to the Department. A committee of nominated non-officials was formed, who could be dismissed if they did not behave properly. These non-officials drew unproportionate amount in their travelling allowance than the grant they were asked to distribute. To add to this the Director had many duties of miscellaneous nature which he had to perform. As if the picture was not complete, if there was any time a tussle between an Indian and a foreign manufacturer, the former had always to go to the wall. By all the above criticism, I do not mean that no useful work was done but the progress was very low. Many industries which could be saved were allowed to die unnoticed.

(iii) Whenever there was a time to axe, the Department of Industries was the first prey of retrenchment.

(iv) These things should disappear in future. Director of Industries should not change often and his policy should be continuous. In order to find out an incumbent suitable for the post, I propose that a man from public may be taken. He must be a man well interested in cottage

industries. His capability should not be judged by his light educational qualifications but by the interest he takes in public works, specially the cottage industries. He should not be selected because of his belonging to a certain creed, community or religion. No nepotism and no favouritism. If such a man is selected from amongst the public he will not join for the sake of emoluments but to serve the public. The Director must not have his leanings towards big industries and he may be quite capable to understand the effect on cottage industries, whenever a question of protection may arise. He must have the courage to open his mind whenever a conflict between the interest of a small and big man is concerned. If need be there may be a separate man to represent big industries.

104. (i) The Director must be helped by a non-official Statutory Committee representing different industries and people who are interested in the cottage industries. In this committee, non-officials may have the majority so that the interest of the workers may have the preference.

(ii) The policy of the Department must be laid down by this Committee but this Committee need not have any executive control, the Director being their main Executive Officer. There must be enough money kept at the disposal of this Committee for grants and other expenses.

105. To avoid any difficulty in the working I propose the following Deputy Directors. There must be four Deputy Directors in charge of the four important branches, viz.:-

- (i) Finance and Commerce.
- (ii) Research and education.
- (iii) Information, Publicity and Propaganda.
- (iv) Museum and Miscellaneous.

It may be in the fitness of things that I may give the duties of these officers in a bit detail to avoid any misunderstanding.

106. (i) I have created a post of Finance separately in the Department so that business work may not be delayed. There may be many decisions to be taken immediately in the purchase and sale of raw material and so also in the sale of goods. There must be good arrangements of financial nature in the day-to-day transaction of business in which there may be no chance of embezzlement but these transactions may not stand the rigid scrutiny of the Department of Finance. Of course, there will be made rules by which this Department will be governed but we have to rely upon the honesty of this officer as he will be the financial head of the whole show without which the whole machinery will remain also and ineffective.

(ii) This man must also be the head of the Co-operative Organization inasmuch as in the beginning a separate post may not be justified. In future development, this officer too will have to be separated. But in case of nationalization of industries, Co-operative man may not be needed.

(iii) I envisage, as far as cottage industries are concerned, that the work of the Co-operative Department should end with the formation of societies but the direction of the working will be done by the Industries Department. If this is not done there will always be friction amongst the two departments. The working of technical societies cannot obviously be looked after by the Department of Co-operation, as technical men will not be under them.

(iv) Co-operative societies will consist of: (a) purchasing of raw material, (b) sale and purchase of finished goods, (c) standardising of products and (d) finishing and designing, etc.

107. (i) **Research and Education**—I attach a great importance to this branch of the Department as upon this depends the success and failure of the whole thing. I have already described the necessity of Research. This branch must have good library, a laboratory and workshop and good collection of literature on different industries, both of foreign and Indian origin. This Department should deal with new cases of raw materials and finished goods and should also find out new process of manufacture.

(ii) Though Research has been entirely neglected but something has been done under education. The Committee visited a few schools but I was disappointed that there is little contact of the schools with the workers outside. There is no arrangement of going amongst them or bringing them occasionally in the Institute. Teachers sometimes are old enough, who have no occasion to refresh their memory. No journals connected with industries are received nor there is any other method to distill down information contained in these publications. There must be some arrangement to refresh their knowledge by travels and discussions. Good experienced men working in the industry, big or small, may be occasionally asked to lecture and give out their experience both to the students and the workers. Best samples of every line may be collected from different localities in the country and from abroad and method of their manufacture be evolved. Up-to-date methods of manufacture may be studied and the interest of the pupils and teachers be kept alive. Exhibition may be organized and attractive rewards may be announced and distributed. Stereotyped methods may be avoided and some arrangements to remain in touch with chemists and engineers be made so that the problems of the industry may be tackled and solved. Books, pamphlets in simple language may be prepared and distributed. Short course in special branches may be organized. Difficulties of workers be studied and workers be encouraged to come for advice. Slides, films and radios may be utilised for this purpose with advantage.

108. (i) **Information, Publicity and Propaganda**—It is another important branch. We should collect information about the detailed position of every industry. We should know the extent of raw material used, men employed, finished goods sold, wages earned, etc. about every industry. So also the difficulties and handicaps of every industry may be collected. Position of that industry in other countries may be ascertained. Tastes and fashions of the consumers may be studied. All such information must be collected. Without such an information no future progress is possible. Such data can only be the background of any systematic study of an industry.

(ii) Most of our goods are not known outside a certain locality. The utility of different articles has not been properly advertised. In certain cases there is ample scope for the consumption of goods in foreign countries provided things are properly advertised. I am struck with many attractive designs and I am sure there is a great market for their sale at the prices at which they are sold by the workers now but the industry does not develop as the dealers are very little interested and they pinch at every occasion, poor people if their things do not sell. No money is spent on propaganda and advertisement. This work has to be organized as soon as possible and there must be a separate man in charge of this type of work.

109. (i) **Museum and Miscellaneous**—There is need of museum for cottage made articles in every big city of the province and also in other places outside it. This museum must have good collection of all our industries and the samples must be replenished every now and then to keep the interest of the visitors alive.

(ii) Travellers must be employed in the country and abroad to keep in touch with the markets of the world both for sale and collecting knowledge of different localities of the country and outside.

(iii) If such an organization is provided and sufficient amount is kept at the disposal of the Department I am hopeful that there is likely to be good improvement all round and soon we shall be placing our industries on a sound and safe footing. By this step the gains will be stabilized and full benefit of knowledge and experience gained will be systematized. Leather, textile and oil crushing are the most important industries of the Province and I propose that all our attention should be concentrated in the organization of these industries first. The experience gained may then be further extended for the use of other industries. I recommend, therefore, that these industries may be selected and efforts may be concentrated on any of them and in one or two important localities. When that is done successfully the field of action may be extended. It is wrong policy to extend our activities over a big area or on many industries. It fritters away our energy. Success, when achieved, works like a contagious disease and it catches like fire. Our aim, therefore, should be to succeed in a small sphere rather than tackle a long field and fail everywhere.

(iv) I may be permitted to point out that success of the organization will depend entirely on the personal touch we create with workmen and confidence we generate amongst them. It must be the duty of every man employed in the Department to see that he is loved by the workmen and that they put implicit faith in him. The biggest officers should have no shyness to mix with the workers, speak their language, study their difficulties and this will laurel for themselves in solving their problems and bettering their lot.

CHAPTER VI

Terms of Reference

"The part which cottage and small factory industries can play in the post-war industrial organization of this Province and in particular the extent to which it is possible to make cottage and small factory industries complementary to large scale industries".

110. I am convinced that in the post-war reconstruction of any industrial development, the cottage industries must find the first place. Without the development of these industries wealth produced cannot be equitably distributed, unemployment cannot be banished and starvation cannot be remedied. The monster of poverty can only be driven out by the betterment of cottage industries. The extent is limitless, the scope is wide and the possibilities of achievement are assured. If the organization we have provided is created and the methods we have advocated are employed, we shall soon be able to supply necessities of life to everybody without imports from outside. There will remain no shortage of consumer goods, specially for the necessities of life. Inflation will disappear. Skill and knowledge will distill down and economic condition will immensely improve. We shall see an area of prosperity for the common man without being afraid of strikes and lock outs which have become the order of the day. All will be employed by themselves and the slavery of the employer will, no more be a burning question. Rich people will no more become richer, there will be far less inequality between man and man. Only those will be forced to starve who shirk from labour.

111. Coming to the second part of the question, I have already stated, cottage industries will be complementary in certain cases to big industries and *vice versa*. But every phase of development will be important in its own place. Heavy chemicals, machinery, manufacture and the like will have to be done on a big scale and their place will not be taken up by cottage industries. Similarly, the place of cottage industry will not be taken up by a big industry. Cottage industry will be the rule and big industry an exception. That being so in every case, nation must decide if a certain article can be manufactured by a cottage industry and when the answer is given in the affirmative big industries will not be allowed to make encroachment and inroads in the sphere of cottage industries. Things which cannot be done on a small scale will have only to be done by big industries.

112. Judging from the above yardstick big industries may have to stop short of the processes where from the work can be performed by the cottage industries. To give a few instances yarn may be produced by spinning mills but as regards weaving the work will be done by the cottage weaver. If all weaving mills are stopped, cottage weaving will be complementary to the spinning mills. Similarly block glass may be manufactured on a big scale by the big factories but bangles will remain to be made by the cottage worker using block glass as their raw material. Leather of special type may be produced in certain cases by large tanneries but articles may be made by the cottage worker.

CHAPTER VII

Power

"Technical Improvements that are possible with particular reference to the use of power. It would be helpful if the amount of the power that can be consumed can be indicated in each case."

113. The world is progressing very rapidly. Raw material processing and equipment are daily changing. Indian workers, who are generally illiterate, who remain isolated and live in a country where there is little arrangement for research and investigation cannot be expected to be up-to-date in the manufacture of their goods. Though there are a few technical schools for a few industries but the teachers themselves know so little that they cannot be expected to impart much to their students. Thus there is a great gap between the present day knowledge and our workers.

114. (i) How this gulf is to be bridged is the question. I recommend that a full fledged department of Research and collecting information be at once created wherein the literature on different industries be collected tabulated and digested. If need be, specimens from foreign countries may be imported. After collecting such an information experts may be consulted as to how these new articles can be prepared by our workmen. At this stage best intelligent workers may also be consulted. When this is done and methods are evolved they should be distilled through peripatetic technical schools.

(ii) If work is done in right earnest all the spade work should not take more than three years and then after this if the efforts are not neglected we can keep this service easily up-to-date.

115. (i) If in such an effort all the provinces combine the work will become easy as the knowledge of experts will be easily pooled and researches may be distributed amongst different people with far little expense on any one province.

(ii) The above method will mostly be useful for existing varieties of goods. But unless new ideas are introduced enthusiasm for improvement will not stay longer.

116. About the supply of power I agree with the general observations of my colleagues and welcome the appendix added for the details of power. However, I would like to add the following points in this connection.

117. In America and Japan, highly industrialised and literate countries, energy distributed for light and fan and small motors is only of 110 volts, while for big motors up to 40 H. P., the distribution is of 220 volts, while in India the voltage is 220 and 440 respectively. The lower volt is far safer than the higher one and in an illiterate country the voltage and distribution must be reduced immediately.

118. The second point is that though my colleagues have rightly observed that in other countries the rates are as low as 2 pies a unit but they have recommended no rates for general distribution. I recommend that the rates for industry should not exceed 9 pies a unit and for agriculture 6 pies a unit with no guarantee of consumption up to 10 H. P., 18 pies per unit be the rate for heat and 3 annas for light. I do not agree as to why an agricultural rate should not be lower than for industry. Agriculture will remain and is still the least paying industry and cannot afford to pay a higher rate. The Government has already agreed to such a distinction and rightly so.

119. Line for connection when paid by the owner must remain his property. It is unjust to grade it by the Government or the distributing company. Water charges should not exceed more than one rupee a year.

120. I do not agree that electricity of low voltage cannot be distributed in village houses. In the first place all houses, barring leaky ones, are quite suitable for electrification and secondly there are very many houses, though made of sun-dried bricks, quite suitable to be fitted with electricity.

121. I may further point out that India's future will entirely depend upon electricity as we have little coal and oil and that too only in one corner of the country and our fuel and power problem can only be solved by electricity.

122. The department should study the different types of small machines, cookers, stoves, washing machines, heater freezing machines, etc. recently introduced in the United States of America in Tennessee Valley and should try to modify and introduce them in the country side. Small industrial machines used in Japan and in the trade schools of the United States of America be imported and their usefulness in the country be tried. Though appendix is a good attempt but it is too small a list.

123. United States of America keeps a separate department of electrification, which gives all help in wiring, etc., to the consumer and discusses with them the details of their connection. We in India in an illiterate country, must do more intensive work of the nature than is done there.

124. Arrangements for making machines, equipment wiring and electric insulators, cutouts, switches, transformers, generators, cables, etc., must be made in the province by the Government. Even turbines may be manufactured with the help of foreign engineers. If we do not do it and start immediately our work will be delayed and we shall soon turn ourselves from a creditor to a debtor country.

125. I wish the engineers could combine to devise a small pump to work on wells with a small motor to solve our problem of irrigation.

CHAPTER VIII

Co-operation

"The nature and the extent of possibility of application of Co-operative principle to cottage and small factory industries."

126. In case Government does not agree to the nationalisation of the cottage industries, as I have suggested elsewhere, the only method of development will be through co-operation. It must be admitted that co-operation is the only solution for the development of economic life, specially for the poor people. For this very reason the Royal Agricultural Commission rightly pointed out, "if co-operation fails, there will fail the best hope of rural India." Co-operation makes the weak individuals strong when combined. In all industrial countries, Germany, England, and other western countries including U. S. A. the principle of co-operation has been the mainstay of small men. In India, however, though co-operative societies are in the picture since long yet very little has so far been achieved. We can say without fear of contradiction that United Provinces lags behind all the other provinces in this respect. There exists the Co-operative Department and there also exist the sufficient number of societies but we must confess that the principle of co-operation has not yet been imbibed even by the officials what to say of the members. The experience in regard to co-operation in the past is far from encouraging but there is no other way to approach the largest number of cottage workers and to make them strong and self-sufficient.

127. Fortunately, it is not a new method for India. In every village of this sub-continent there existed a sort of co-operation (Bangwara) in agriculture from times immemorial. Since the time corporate spirit of villages has disintegrated and their self-sufficiency has been broken by centralizing power in the Executive, co-operation has ceased. Still there are stray cases where people combine in emergent cases for a short period. We have destroyed the old system without evolving a new one. Today we harp on co-operation without really imbibing its spirit.

128. The remarks by the Fact Finding Committee of Handloom and Mills (1941) in this respect are very interesting and as it is the latest pronouncement of a weighty body, I take the liberty of referring to it. The Committee held that co-operation has not been very successful and they attributed this to the fact that the movement was not built on proper foundations. They emphasized that it was not enough to find money at low rates of interest. The Co-operative Societies must render the services which the weavers and merchants get from the sowcars in the matter of supply of yarn and sale of finished goods. Another very important point brought out by the Fact Finding Committee is that the co-operative societies do not start functioning under proper guidance. They attack problems on theoretical principles (underlined are mine). They try to save the weaver from exploitation by the sowcar without trying to replace the sowcar. The result is that the sowcar is violently antagonized and concentrates his energies on destroying the organization. The workers on the other hand are dissatisfied as they find that they do not get facilities which they were getting from the sowcar. The Fact Finding Committee has gone to the extent of suggesting that "there is considerable advantage in utilising the professional merchants in the marketing transactions."

129. My experience is similar and it agrees with the above observations of the Fact Finding Committee. I consider starting credit without saving

wrong in principle and that the officials of the co-operative society do not know enough of the business they handle and they refuse to take advantage of the available talents in the country for the purpose. How can any development take place when teachers have to be taught. The training of the co-operative workers is inadequate inefficient and lacks the "real" spirit. Societies as they exist today are official ridden and they are spoonfed.

130. (i) The secret of success of co-operative movement lies in the fact that officials mix freely with the members and create confidence amongst them. It is the service in the real sense of the term which has to be rendered and not the expectation of loyalty from members simply because you advance them loans. As long as we do not find suitable people imbued with missionary spirit, we are not likely to succeed. It is not the brain that is so much required, but it is the heart which matters. Unfortunately, the Government attaches more importance to educational qualifications than the man who matters.

(ii) Registrar of Co-operative Societies is a gentleman who must be taken from the Executive and who is likely to revert to the administration after a brief period of his service there. Often he has never been an authority on co-operation and he cannot be expected to learn while in office. Such a man at the top cannot create confidence amongst his subordinates. The organizers feel that their part business is done as soon as they get money from the treasury and advance loans. If the interest is not realised in time, they can easily and conveniently show it as realised by giving another loan to the member. This method continues till the society becomes bankrupt. The position of the working societies for marketing or for any other purpose is still worse. Names of the bankrupt or defunct societies must remain on the list to swell the number of societies for years.

131. (i) In India files are manufactured in the largest number possible in all departments and why co-operation be an exception. The supervisors and organizers should not forget that they are paid out of the public funds and that it is their primary duty to have regard first to care for the public needs.

(ii) Instead of attacking the problem in a small locality on all its fronts and making it a success we generally spread our activities over a huge area which we cannot manage with a result that instead of co-operation becoming a contagion and spreading like fire it is smouldered and gets extinct.

132. I admit that literacy which is necessary for mental operation and accurate accounting, is the keynote of success in business, is the main handicap of workers without removing which no great headway is possible. Every effort should, therefore, be made to remove this handicap. It will be ideal if nation building activities preceded with the removal of illiteracy at the earliest possible opportunity.

133. There is yet another defect. Co-operative societies are sometimes run by two departments and they instead of creating honest rivalry begin to injure each other. I have tried to meet this objection by creating the post of a Deputy Director of Co-operation under the Department of Industries and leaving the formation of societies to the Co-operative Department.

134. I give great emphasis on the training of the staff of workers and supervisors. They must know their job well and be willing to go into the details of the working. Supply of credit must be the smallest part of the work. We should concentrate more on purchasing and marketing and

finishing societies so that the raw material may be supplied cheap and workers be relieved of the worry of marketing their goods. Of course, the charges for this service and money invested must be lower than the poor man is forced to pay to this sower.

135. When we visited the Emporium I was shocked to see that the people in charge have very little knowledge and experience of purchase and marketing of products. Whatever little they can do, their efforts are curbed by rigid rules of finance, which will not allow them to dispose off an article which has been damaged or whose prices are falling. The person who is in charge of marketing has little to do with the fixing of prices. He is not even sometimes consulted.

136. Advertising, propaganda, marketing, purchases are very important subjects and they require not only training but honesty in dealings and financial responsibility at every stage without which business is impossible. We seem to exploit youngmen who need job and have the misfortune to join this branch of co-operation. We want to make people honest by rules rather than by habit and experience. In order to avoid embezzlement or loss of money we may demand security, by this we must give scope to them showing their worth. There must be some arrangement to train these men in business in well-known commercial houses. An educational institute in that respect is simply a poor substitute. It may produce good theorists but hardly practical men.

137. Some of the workmen have been doing this type of work and it may pay to employ them. Due to inexperience it is likely to purchase raw material at high prices or of an unsuitable nature and such mistakes may ruin all the structure of our work. If such a mistake happens it should not be passed on to the workers and the Department should suffer the loss if the mistake is not intentional else the responsible must pay.

138. The officials employed must have the courage to mix with the workers, sit with and talk to them, speak their language and willing to study their difficulties. People who are unfit to do it must have no place in the organization, however high academical qualifications they may possess.

139. By creating co-operative societies we have antagonized people who are doing that job while we have not been able to do that work even half as efficiently or cheaply. I suggest, therefore, that whenever a new society started at any place a proper study of the difficulties and handicaps and types of the people to be organized should be made. After this a complete scheme should be planned out. Let our scope be as limited as possible but our ideal should be to make a success. If we succeed in one place, it will be easier to form another society nearby. There is no harm in handling only one industry. Extensive work should not be the aim but intensity of work to get success be our ideal. Such a procedure will require less money and less staff and the work will be more effective. We must aim at teaching principles in actual practice rather than get them committed to memory.

140. (i) Best and solvent workers generally do not join co-operative societies. The reason is obvious but the failure of societies is also apparent.

(ii) The only remedy lies in introducing compulsion in forming co-operative societies. If such a power be taken in the Act—and cautiously administered control of co-operative societies will be better. Standards can be introduced, and sale and purchase of finished goods and raw material can easily be organized. This is not a novel idea inasmuch as no less a

civilized country than England has already introduced the method with success in milk marketing and other types of marketing boards. In our Province the Government has indirectly introduced the system of compulsion in cane societies and there are numerous cases where cane growers have resigned and forced by the authorities to remain in society. If such a general power is taken and be applied to one industry in one locality and then expanded, its beneficial results will at once be apparent. Persuasion would have succeeded if the merchants and sowcars would not have been there. They must try to exist and no Government officials can give people easier and apparently cheaper facilities against them. Most of our societies have failed and now will fail in future on this score. Compulsion is the only remedy and must be introduced, the sooner the better.

(ii) Though my colleagues agree with the desirability of such a course, but they seem to be apprehensive of its introduction to begin with. They do not propose any alternative scheme. I maintain that it is only in the beginning that such a step is necessary, when the workers reap the benefit of co-operation they will never entangle themselves in the cultches of interested people.

(iv) I, however, feel that the principle of limited liability in purchasing, marketing, finishing and such other societies must be introduced so that the solvent members may not feel hesitant to join.

141. Though I have tried to enumerate the defects of the present system and have given the type of societies needed but this change can come only if we employ the right sort of people. A question may not be irrelevant to ask as to why a karkhanadar or shop-keeper generally succeeds both as a credit and sales agency, while the co-operative society generally does not? The reasons are not far to seek. Firstly, a merchant or sowcar or a karkhanadar takes interest in his business at every stage, he being at the spot knows the habits of the workers and also the financial position of his clients, he can dispose off his goods in the falling market, he keeps his accounts in his own way, while a government servant cannot be expected to have any self-interest, for latter does not take interest in the locality or must take time to know the workers, he knows very little details of the market requirements, or the articles he purchases, he is bound by the rigid rules of the Department. All these defects outweigh the cheap credit the latter can command. The workers too often become disloyal to the society and the society is thus shackled. How to avoid these defects is the next pertinent question. To get government servants more interested, I propose, besides the proper training and experience which I have emphasized, every member of service in the Department be paid a certain amount as commission or reward on the work that he achieves and this reward must be attractive enough to make him interested in the duty entrusted to him. Further, the servants may be asked to give securities over which they may be paid interest at the bank rate. These two things may help a great deal in improving the state of affairs.

142. (i) I further propose that the talents available in merchants and sowcars must be utilized by co-operative agencies. These people if they join will get cheap credit and proper help from the Department. We are sure that some of them may be willing to come in, in their own interest. They can give proper security and their experience may be utilized to advance co-operative societies. An experiment in one or two places may be made and adopted, if successful.

(ii) Co-operative society is a union of persons and as such requires non-officials who take interest in their uplift. Unfortunately, officials and non-officials do not pull together in the Province. We hope in future dispensation things will improve.

CHAPTER IX

Regulation of Labour

“The possibility of applying to these Industries the principles of the Factories Act with a view to avoiding sweating (the question of wages may be left to Wage Board).”

143. (i) Much information in regard to actual conditions of labour in cottage and small factory industries was not available. It was the report of the Royal Commission on Labour, published in 1931, which could be tapped as a source of authentic information. In Chapter VII of the report, the Commission has dealt with the question of unregulated industries and given an account of labour conditions in some important industries such as—Mica factories, Wool cleaning, Shellac manufacturing, Durce making, Carpet making and Tanneries. The conditions in these industries are hardly sufficient now and were described as being very unsatisfactory, specially in regard to sanitation and health of workers, particularly of children. The Labour Investigation Committee appointed by the Government of India have recently conducted some surveys in small scale cottage industries, but these reports are not yet available. The United Provinces Labour Department has also conducted enquiry into labour conditions in brassware industry in Moradabad. This report which has been published by the Department of Economics and Statistics, supplies useful information, so far as the Moradabad Brassware industry is concerned. While information of this type is not available in respect of other cottage industries and small-scale industries in the Province, it can be safely assumed that the conditions in Moradabad Brassware industry are typical of the conditions of other industries.

(ii) The following two types of industries were considered as non-regulated industries by the Labour Commission :

- (a) Those which use power but do not employ 20 persons or more.
- (b) Which do not use power.

(iii) The Commission recommended the application of the whole of the Factories Act to the factories of the first category, and enactment of a separate Act, providing minimum age for employment of children to be ten years, as one of the provisions. No legislative action has been taken by the Government of India to implement the Commission's recommendation for a separate Act. Only the Central Provinces has done something to regulate labour in unregulated factories.

(iv) In the United Provinces an Act known as “The Employment Act of 1938” was passed. This was subsequently amended in 1939. This Act and its amendments prohibit the employment of a child who has not completed his twelfth year, in any of the occupations mentioned in the schedule which contained the carpet processes given below :

(1) Bidli making, (2) Carpet making, (3) Cement manufacturing (Bagging of cement), (4) Cloth printing, dyeing and weaving, (5) Manufacture of matches, explosives and fire-works, (6) Mica cutting and splitting, (7) Shellac manufacture, (8) Soap manufacture, (9) Tranning and (10) Wool cleaning.

(v) The annual report of the working of Factories Act for year 1914 stated that due to insufficiency of staff the Act could not be enforced rigidly.

(vi) The amended Factories Act of 1910 extended the provisions regarding health, safety, hours and conditions of work relating to children and others to small factories which employed ten or more persons and used mechanical power. Due to lack of the staff this legislation could not be enforced in the United Provinces for several years. Through a notification in January, 1934, the Government of United Provinces could make the Factories Act applicable to all premises working with ten or more workers with power but it decided rather to regulate a small number of concerns effectively than to make the rule applicable generally to all such concerns. The industries to which the Act was extended were :

(1) Printing Presses, (2) Motor garages, (3) Engineering works, (4) Glass bangle cutting factories, (5) Ginning and Pressing factories, (6) Ice factories and (7) Brass metal works.

144. (i) From the above survey it would be seen that while the Government has been earnest in trying to regulate in small and cottage industries, the inspecting staff has been too scanty to enforce effectively the provisions of the Acts. In matters like these I consider that it would be unwise to take any drastic and sudden action. I am, therefore, of the opinion that the Provincial Government should make the fullest use of the powers conferred by sub-section (1) of section 5 of the Factories Act, 1934, and should extend the Factories Act to all manufacturing establishments employing ten or more persons and working with or without the aid of mechanical power. For this purpose the following classes of industries should be selected in the first instance :

(1) All places where the process of tanning or manufacture of leather or leather goods or articles is carried on.

(2) All places where the manufacture of food products is carried on.

(3) All places where the process of dyeing, printing, spinning or weaving of yarn or cloth is carried on.

(4) All places common, known as saw mills or wood works where the process of cutting or otherwise treating wood is carried on.

(5) All places where the process of extracting oil is carried on.

(6) All places where the process of cleaning, milling and otherwise treating rice, dal or other grain is carried on.

(7) All places where the process of manufacture of lime and surkhi is carried on.

145. (i) I am of the opinion that while in the case of small-scale industries, it might be advisable as well as possible to enforce the Factory Act in some way, in the case of cottage industries it would neither be advisable nor possible to enforce labour legislation for the following reasons:

(1) A vast majority of cottage industries are run by artisans without the aid of paid labour, and mainly with the help of the members of their families or relatives, or they are part-time occupations of the cultivating classes. These self-employed persons do not stand in need of protection at present when a large class of wage earners are without any legislative protection, e.g. shop assistants, transport workers, workers engaged in the building industry and other casual manual labourers. In some advanced countries Labour Legislation covers all classes of wage earners. In course of time we too may have to enact similar legislation. The question of improving

the lot of agricultural labour is now receiving attention. So long as this is not done, it is unnecessary to touch cottage industries.

(2) The cottage industries are so many and widely scattered that it will be impossible to enforce any legislation. As and when legislation for agricultural labour is enacted the question of administering legislation for cottage workers will not present unsurmountable difficulties. So this question has to be deferred for the present.

(ii) To sum up, I am of the opinion that the Factories Act can be applied to selected small-scale industries for the present. These have already been mentioned in paragraph 144 above. Gradually other small industries may be included. In regard to cottage industries, there should be no legislation for the present.

146. I feel difficulty in distinguishing workers combining under co-operative societies and employing their own children as they do help now in small operations. Such work gives them training, enjoyment and little financial help also. If we apply the Act of not employing child labour we deprive the workers from employing them and this will mean a handicap for not persuading the workers to combine. In any legislation, therefore, such co-operative societies may be exempted but they should not be allowed to employ children other than their own in their works.

Summary of Recommendations

I am sorry to say that my colleagues ought to have courage of their conviction and they ought to have made recommendations which they thought proper. Summarising the ideas as "suggestions" has turned the document into a thesis than a report.

I am, therefore, obliged to summarize my recommendations as under :

CHAPTER II—Survey Textile

1. **"A" Hand spinning**—When villages are supplied with cheap electricity ginning of cotton must be encouraged in villages so that cotton seed may be available for milch cattle. It will also develop a side industry, production of lint (para. 8, page 8A).

2. Hand spinning on charkha is not cheaper in comparison to spinning by mills. It is necessary to devise an improved charkha. There should be a handsome reward for manufacturing improved charkha and competition should remain open for three years for the entire world [para. 10 (iii), page 9A].

3. There should be a common fund of 5 lakhs by all provinces to carry out research in the improvement of charkha and circumstances under which cotton may be spun with advantage (para. 10, page 9A).

4. **"B" Khadi**—Legislative help must be given to push genuine khadi (para. 11, page 10A).

5. For proper sizing research should be carried on so that hand spun yarn may be easily woven (para. 11, page 10A).

6. All-India Spinners' Association should try to concentrate on cloth which require doubled or tripled yarn as weavers like it (para. 11, page 10A).

7. Government should patronize All-India Spinners' Association so that spinners may get more wages and improvement in khadi may be made. Cloth which Government and local bodies purchase for uniforms, hospitals, schools, should be from All India Spinners' Association. Khadi's quality

of giving more warmth in the winter should be advertised (para. 11 page 10A).

8. **"C" Yarn**—In order that handloom weavers may get requisite quantity of yarn the existing cotton mills should not be allowed to weave yarn beyond a certain maximum and new mills beyond 25 per cent. Mill yarn should be supplied at the rate fixed by Government. The rate should not be higher than the rate at which the mills produce themselves. All mal-practices in yarn should be punishable and prosecution should be made cognizable. An enactment to this purpose must be introduced. Certain types of cloth should be reserved to be weaved by handloom only. Provincial Government should start their own spinning mills. Step should be taken to move Central Government to pass an All-India Act on the above lines (para. 12, page 10A).

9. **"D" Dyeing and Spinning**—Government should take steps to organize the dyeing and printing industry on co-operative lines. Either the middlemen should be eliminated or there should be control over them. This is necessary to keep up the standard and provide adequate wages to workers (para. 15, page 15A).

10. **"E" Silk**—Sympathetic systematic and sustained efforts are needed to produce silk in the Province. A suitable centre for sericulture should be established. A beginning may be made by developing silk worm which grow on Asna trees near about Abraura, district Mirzapur. Plan should be prepared to make sericulture a side industry to agriculture. Our Provincial Government should take full advantage of the presence of Central Sericulture Institute, so that we may produce our silk of good quality. Till silk is not produced, cocoons instead of silk may be purchased and silk produced in the Province (para. 16, page 16A).

11. **"F" Woollen production**—Wool weaving—The Animal Husbandry Department must make investigation to provide the economic breed of sheep for different localities so that the province may have the wool required by it. Proper method of clipping and grading of wool should be introduced and Government must start a factory where woollen yarn is made and supplied to the weavers. It is recommended to All-India Spinners' Association to re-examine the question whether the woollen yarn can be classed as khadi if carding is done by machines. Government should provide facilities for the use of small machinery by workers for carding purposes. As regards yarn, a spinning mill should be established and woollen mills should be prohibited weaving woollen yarn. In order that quality may not deteriorate, it is necessary to control the carpet industry. Undesirable element is coming in and if control is not exercised, industry would be ruined (para. 17, page 18A).

12. **Leather and Leather goods—"A" Tanning**—The flaying of skins and hides is defective and the Hide-Cess Committee drew attention to their flaws and suggested remedies. Government should see to these defects. Proper grading and tanning will encourage improvement. Immediate steps should be taken to improve the village tanning and to introduce chrome tanning on a cottage scale. Only those persons who have faith in the development of tanning in cottage scale should be employed. Steps should be taken to grow and develop tanning in the Province (para. 23, page 22A).

13. System of reducing the tanning period from six months to three months should also be introduced. Scheme for improving village tanning should rank high in post-war planning. There should be demonstration in tanneries and workers should be organized on co-operative lines. Steps

should also be taken to produce first class patent leather in the Province (para. 23, page 22A).

14. **"B" Leather and Leather goods**—In respect to leather and leather goods, research in the technical field and organization for distribution on the lines of Bata and Flex are the immediate necessity of the industry. An organization may be started immediately so that not a single hide or skin is exported. It is possible to do so if bark tanning is improved, tanning material is made available, chrome tanning on cottage lines is introduced and equipment is evolved and made available to villagers and for suitable machines for cheap production are introduced (para. 24, page 44A).

15. **"C" Grindery**—Steps should be taken by Industries Department to supply necessary tools and necessary advice to the cottage workers who produced articles of grindery during the war, which used to be imported from outside (para. 25, page 25A).

16. **Metal**—India has neglected manufacture of alloys. Unless this is done through scientific methods and controlled furnaces, India shall be at the mercy of the foreign production. It is necessary to collect material on the production of alloys, study it and propagate it to the public (para. 28, page 26A).

17. Small machines for different casting industry may be introduced (para. 29, page 26A).

18. Proper guidance and encouragement should be given to village smiths for the manufacture of sales (para. 31, page 26A).

19. Supply of punched and shaped sheets is necessary so that trunk making centres may thrive (para. 32, page 27A).

20. In the production of cutlery, method of heat control arrangement is necessary. Small electric grading machines will also help the industry (para. 33, page 27A).

21. The lock and metal fitting industry needs organizations of small producers to minimise unhealthy competition and deterioration of quality. The gradation of quality should be introduced and workers should be relieved of marketing worry through cheap and efficient agency (para. 34, page 27A).

22. Proper study and research is necessary for producing quality goods and establishing wire-netting industry (para. 35, page 28A).

23. **Engineering**—It is the moral duty of Government to equip the engineering workshops started during the war with modern appliances so that they may continue (para. 36, page 29A).

24. **Wire-drawing**—Wire-drawing industry has a great future provided up-to-date methods are studied and introduced and small machines are used (para. 45, page 31A).

25. Gold thread drawing industry needs organizations and certificate of the quality of the articles produced (para. 46, page 31A).

26. **Earthen Pottery**—It is necessary to change the taste of the people from using the Chinawares to earthen vessels which are more hygienic and cheap. For artistic type of Lucknow, cheap and effective packing is a necessity (para. 47, page 32A).

27. **Glasswares**—Introduction of scientific improvement and supply of proper type of glass at cheap rates should prove useful for glasswares and bottle making industry (para. 49, page 33A).

28. Local firms of Ferozabad who have started making liquid gold need help and guidance (para. 50, page 65).

29. Supply of gas to joiners who work under the most unhealthy condition, deserve consideration. There should be small gas plants instead of one big plant (para. 50, page 34A).

30. Immediate steps are necessary to remove the complaint regarding the most injurious atmosphere of the bead-making room at Benares (para. 51, page 35A).

31. **Agricultural Industry**—A section for conducting research to investigate new and commercial uses of agricultural articles is strongly recommended. Attempts should be made to establish and popularise agricultural industries in the villages themselves by giving technical help and guidance (para 52, page 35A).

32. **Ghee Making**—If Ghee industry is to survive, there is an urgent need for the protection of milch cattle and also strong control and legislation against adulteration (para. 53, pages 35A—36A).

33. **Village Oil Crushing**—Co-operative marketing for oil crushing should be organized, supply of stock of oil seeds should be maintained, pure edible oil should be sold at reasonable prices in sealed containers. This is necessary to develop indigenous oil-crushing (para. 55, page 37A).

34. **Saltpetre**—Method of production of saltpetre is crude and requires improvement. Process of artificial growth of saltpetre may be introduced. Effort should be made to develop, utilize saltpetre industry (para. 56, page, 37A).

35. **Food Industry**—Food industry like production of evaporated milk, jams, jellies, syrups and dried vegetables, parched grain, dal splitting, etc. should be established where the raw material is produced. Small machines should be provided to a group of villages for the purpose (para. 57, page 38A).

36. **Fibre Industry**—Scientific methods for netting fibres and introduction of small machines is recommended (para. 58, page 39A).

37. **Tobacco**—There is need for studying the flavour of bidi tobacco, so that biddies may replace cigarettes (para. 59, page 39A).

38. **Perfumers**—Steps should be taken to organize growers of roses for producing their own perfumes (para. 60, page 40A).

39. **Bee-keeping**—Bee-keeping should be subject for basic training in bee rearing localities and education should be given in studying habits of bees and methods of bee keeping and use of appliances for honey produce (para. 61, page 40A).

40. **Chemical Industry**—A section should be opened in Harcourt Butler Technological Institute for research and analytical work (para. 62, page 40A).

41. **Borax**—The possibility of reducing cost of production of refining Tibet borax at suitable place should be examined (para. 63, page 41A).

42. **Soap**—Soap industry needs better organization (para. 64, page 41A).

43. **Furniture and Wood Industry**—In order to stabilize the furniture industry, it is desirable to make new lines and full use of material like plywood, plastic should be made. Quality should be guaranteed (para. 68, page 42A).

44. Use of well seasoned timber and improvement of design production of standard quality goods is the need of wood carving at Saharanpur (para. 69, page 42A).

45. The toy industry needs reorganization and introduction of machine for cheapening the cost. Attractive designs, bright paints are needed (para. 70, page 43A).

46. **Hand-made Paper Industry**—Paper making needs small tools of production as in Japan or China, less expensive methods, legislation for using hand-made paper for certain purposes (para. 75, page 44A).

47. Fountain pen industry deserve all support from Government (para. 77, page 45A).

CHAPTER III

48. **Effect of War**—Provincial Government should try to obtain information from Central Government in respect to supplies of different articles made to Supply Department for future reference and evaluating the potentialities of our workers and natural resource (para. 79, Page 46A).

49. If India is to take advantage of the present war, she must make out her own small contrivances, and make full use of the available skill, utilize foreign expert and develop cottage and small industries (para. 82, page 47A).

50. India should make her own machinery and plant as early as possible rather than depend on imported machinery (para 81, page 48A).

51. We should not depend upon foreign countries for our raw material. We should use the material which we produce in province or make what we want to use. The industries should be reorganized with this thing in view (para. 85, page 48A).

52. We must learn to use electricity in place of coal of which we have only a limited quantity. Human and bullock power should also be used as energy (para. 86, page 49A).

53. Cottage workers needed proper guidance to produce standard goods of given specification. If market is assured, workers can produce more quantity than they usually do. If there should be a margin of profit, workers are forward enough to produce an article. Workers are to be organized, raw material to be supplied to them, specification given and they are to be relieved of marketing duty. What is necessary is an organization which takes on itself the duty of providing raw material and selling goods and works for the profit of the worker. In India we should have a system similar to what prevailed in Japan before the war, where bank played all the part and then distributed the profit. There should also be an agency which should carry out reasearch and filter the result to the worker. The research may be either in process, in chemical, in design of machinery or design itself (paras. 88—90, pages 49A—51A).

CHAPTER IV

54. **Problems and their remedies**—The problems of cottage worker in almost all industries are the same. The first problem is the supply of raw material and arrangement will have to be evolved to supply raw material of good quality resonable prices. For this only a co-operative society

will not do and Government will have to force factories to give a fair deal to the worker. In case of imported material, the case of protection to mill industry must be studied with reference to the effect that it will produce on the worker and he should be given necessary subsidy or rebate (para. 92, pages 51A-53A).

55. Finance is an important item. The Reserve Bank should supply finance to the industry and smaller industry, lower should be the rate of interest. Government should supply credit at nominal or no interest. Credit societies should give money for productive purposes. The question how far Reserve Bank of India can be helpful to cottage industries should be examined. It is necessary to make the accounting system more flexible and less rigid so that worker may not have to run to money-lender again. The possibility of creating an independent organization to deal with all financial aids should be studied. To begin with a sum of 5 crores should be provided by Government for the development of industries over a period of five years (para. 93, pages 53A-54A).

56. Without technical improvement, the cottage industry cannot complete. Imparting of proper type of technical education carrying out of research and disseminating the results to the workers should be the duty of the State (para. 94, page 54A).

57. The worker does not get opportunity to evolve new designs due to various reasons. There should be an agency to study the change in fashion and taste, both in internal and external market. Standard should also be evolved so that the articles may be easily acceptable in foreign markets (para. 95, page 55A).

58. There should be an agency for the workers who should undertake propaganda, advertisement and marketing of the products. The worker can ill-afford to do it himself (para. 96, page 55A).

59. Government should examine all cases in which taxes have been levied by local bodies on the industry and abolish them. The Railway should be taken into account, the total amount of the produce of an industry that it deals with and allow concessional rate to the worker in that amount. The cottage worker is not in a position to deal in huge stock. The cottage worker may have also to pay illegal amount to send his goods and while laying down the rates of freight, this factor should also be kept in view (para. 97, pages 56A-57A).

60. Arrangement for finishing should be on attractive basis and a small change may be made in cottage worker (para. 98, page 57A).

CHAPTER V

61. **How to stabilize the gains**—The foremost and most practical method to help cottage industries is to nationalize them, i.e., Government should take the entire responsibility to utilize the skilled labour for the production of useful goods and selling them at a rate which keeps the unemployed free of wants. Different industries should be taken and organized on a sound basis. This will also help the Government in removing the problems of unemployment and underemployment. The cottage industry is a well established institution and the question is only of organizing the disorganized. Any loss in the beginning is worth undergoing for the sake of large number of workers. Experiment may be made with one or two industries, say Textile or Leather. The present is the most opportune

time to do it as raw material is controlled, sales organization like Emporium exists the things are in demand (para. 100, pages 57A-58A).

62. If Government thinks nationalization of cottage industries is not feasible, the other method is to organize the cottage industries (paras. 101-102, pages 58A-59A).

63. The first and foremost link in the organization is the Director. He must be a pushing, enthusiastic worker having a spirit for service and commercial experience. He should not be frequently changed and his policy should be continuous. He should be man from public who has interest in cottage industries and has no leanings for big industries. There should be no nepotism in selection (para. 103, page 59A).

64. To help the Director there should be a non-official Statutory committee representing different cottage industries. The Committee will lay down policy and Director will follow it. There should be enough money at the disposal of the Committee for grants and other expense (para. 104, pages 59A-60A).

65. There should be four Deputy Directors for (1) Finance and Co-operation, (2) Research and Education, (3) Information, publicity, and propaganda, (4) Museum and miscellaneous (para. 105, page 60A).

66. Deputy Director of Finance and Co-operation will be responsible for all arrangement of financial nature. He will be also head of Co-operative organization. This may have to be separated later on. The co-operative societies will consist of purchasers of raw material, dealers, finished goods, finishing and designs, etc. As soon as societies are formed they will work under the Industries Department (para. 106, page 60A).

67. Great importance is attached to Research and Education. There should be a good library having literature on different industries and good laboratory and workshop. This section should deal with new uses of raw material, finished goods and find out new processes. At present there is no contact between Technical Institutes and workers. This should be kept and the knowledge, e.g. teachers may be kept up to date by various means of travels, discussions, lectures, exhibitions, contact with chemists and engineers, short courses, etc. (para. 107, pages 60A-61A).

68. Information publicity and propaganda is another important branch. We should have complete information about each and every industry, including the difficulties of the industry. Taste and fashion should be studied. Goods must be advertised outside and organized propaganda should be carried on (para. 108, page 60A).

69. There should be a museum displaying goods of cottage industries, which must be replenished now and then to keep the interest alive. There should be travellers who go round the country and abroad to study markets for sale. First of all, only leather and textile and oil should be selected, and efforts concentrated on them and field should be extended as success is achieved. The success or otherwise of this machine will depend on the contact that officers maintain with the workers and confidence that they create in them (para. 109, pages 61A-62A).

CHAPTER VI

70. Role of Cottage industries in post-war period—In any post-war reconstruction, cottage industry must find the first place. This will produce wealth, distribute it equally, banish starvation and unemployment, only those who shrink work will starve (para. 110, page 62A).

71. In the post-war era, cottage industries should be the rule and big industries an exception. Only those things should be produced which cannot be produced in cottages. In some cases big industries may have to stop short of processes wherefrom work will be performed by the cottage workers, e.g. spinning will be done by mills and weaving by cottage workers (para. 111, page 65A).

CHAPTER VII

72. **Technical improvement and use of power**—At present there is great gap in the knowledge of cottage worker, it has been suggested that there should be a department for research and collection of information. In consultation with experts and intelligent workers, methods of preparing new articles should be evolved and distilled to workers through peripatetic technical schools. If all provinces combine in the effort, the work will become easy (paras. 113–115, pages 65A–61A).

73. The rates are too high and rules too rigid and wooden. Energy should be made available at 9 pies per unit to industry, 6 pies to agriculture, $1\frac{1}{2}$ annas for heat and 3 annas per unit for light and fan. Rules should be made simpler, lower voltage 110 for small motors light and fan and 220 of motors up to 40 H. P. be introduced. Small machines be introduced for industries. Electric goods be manufactured in India and small motor pump be devised (para. 118, page 61A).

74. The Department should study different types of electrical goods like machines, cookers, stoves, etc., and try to introduce them in the village (para. 122, page 65A).

75. There should be separate department to give help in writing (para. 123, page 65A).

76. There should be arrangement to make electrical apparatus of different description (para. 124, page 65A).

CHAPTER VIII

77. **Application of Principle of co-operation to cottage industries**—In case Government does not agree to nationalize the cottage industries, co-operation is the only remedy. So far co-operation has not succeeded, but this is only the approach (para. 126, page 65A).

78. Co-operation has not succeeded as it has not been built on proper function. Co-operative societies must render the service which merchants and sowcars render. Instead of antagonizing sowcars they must utilize their services and offer some facilities to worker which sowcars do. Credit should not start without saving, societies should not be official ridden as they are today and a missionary spirit on the part of officers together with the knowledge of co-operative principles is needed (paras. 128–130, page 66A).

79. The problem should be attacked in a small area on all fronts rather than in a wider area. Removal of illiteracy is also a condition of success of the movement. Co-operative societies should not be run by two departments, i.e. Co-operative Department and Industries Department as at present. Staff should be trained properly for the work. Credit should form the smallest part of the society. It should be purchasing, marketing, and finishing which societies should undertake.

Staff should be trained in these jobs and afterwards they must be given scope to prove their worth (paras. 131-134, page 67A).

80. Before starting a society, study of the difficulties handicaps, types of the people to be organized, should be made and thereafter a complete scheme planned out. The work should be intensive rather than extensive. The aim should be to succeed in the idea rather than have unlimited scope (para. 139, page 68A).

81. At present best and solvent workers do not come in the society. The remedy lies in introducing compulsion in forming societies. Success of the society can be assured only if all join. To draw in solvent members, principle of limited liability should be introduced (para. 141, page 69A).

82. To create interest in the government servants working in the Co-operative Department besides proper training and experiences, they might be given certain reward or commission on the work done. They might be asked to give securities on which interest may be paid on bank rate (para. 141, page 69A).

83. Talent of merchants and sowcars must be utilized. They will get cheap credit and help from Department (para. 142, page 69A).

84. **Application of Factories Act to cottage and small industries**—In the matter of application of the Factories Act to cottage and small industries, it would be unwise to take any drastic and sudden action. Provincial Government should make the fullest use of the powers conferred by sub-section (1) of section 5 of the Factories Act, 1934, and should extend it to all manufacturing establishments employing ten or more persons working with or without power. The Act should first be applied to the type of industries given on pages 138-139, paragraph 144 in the first instance (para. 144, page 71A).

85. While small industry may be governed by Factories Act in some way, it would not be advisable to apply the Act to cottage industries at present, due to the fact that there are many other occupations which do not come under the Act and because these industries are scattered.

NOTE—Mr. M. C. Pant first agreed with the majority and intended to sign the majority report, but on reflection decided to agree with the minority report.

MUKHTAR SINGH.

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